the OIL AND GAS JOURNAL

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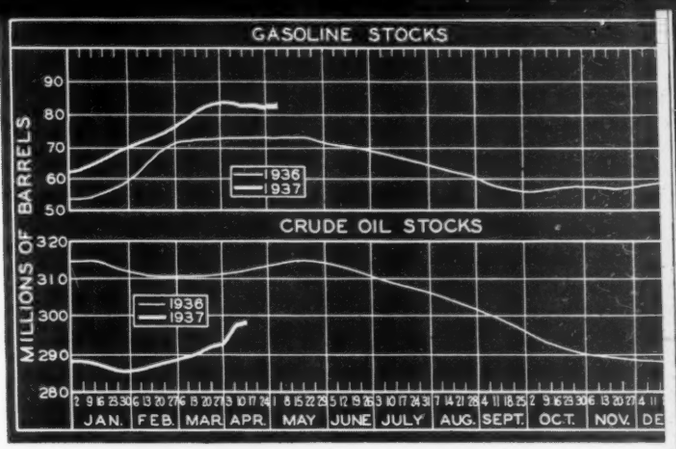


May Starts Close to April Peak

MAY got under way with national crude output at about the same peak levels as those of late April. For the past week Oklahoma and California production was slightly lower, a decline largely offset by increases in Texas and states with smaller production. The feeling is becoming more general that the present output, which in most states is greater than Bureau of Mines recommendations and state allowables, is too high for May and crude stocks will continue to climb unless allowables are observed. Statisticians who have projected May requirements agree that they will be higher than in April and substantially greater than in May of last year. They are unable, however, to justify as large an increase in output as now seems assured for the next 30 days.

CRUDE PRODUCTION *3,497,693 barrels daily average—down 3,591 barrels.*

CRUDE STOCKS *297,468,000 barrels as of April 10—up 94,000 barrels.*

GASOLINE STOCKS *82,273,000 barrels as of May 1—down 30,000 barrels.*

REFINERY RUNS *3,140,000 barrels daily average past week—up 15,000 barrels.*

Current reports indicate crude buyers are not as anxious to make new well connections as they were a few weeks ago and all of last year. Cases are known in which these buyers have offered limited quantities of crude to refiners because they have more crude in their lines than their own plants require at this time. Several of the major buyers continue to run crude to storage.

Investigations of reports that crude was available under the posted schedules show that these offerings are confined to isolated fields which do not have outside pipe line connections. Producers in these cases are forced to accept lower prices from skimming plants located adjacent to the fields or from other buyers who transport the crude by tankcars. In effect, the sellers in these cases are absorbing a disadvantage in transportation costs. On the other hand, active competition for crude connections continues in East Texas, and various arrangements are reported in which the buyer is paying more than the posted schedules.

In field operations there were no outstanding developments during the week. Some of the recent wildcat discoveries do not appear as promising as they did last month in pointing to fields of major importance. The same situation exists in certain extension tests. Several prospective pool extensions and pool openers were near completion in Texas and Kansas. A large number of wildcats were under way in Oklahoma, Kansas and Texas.

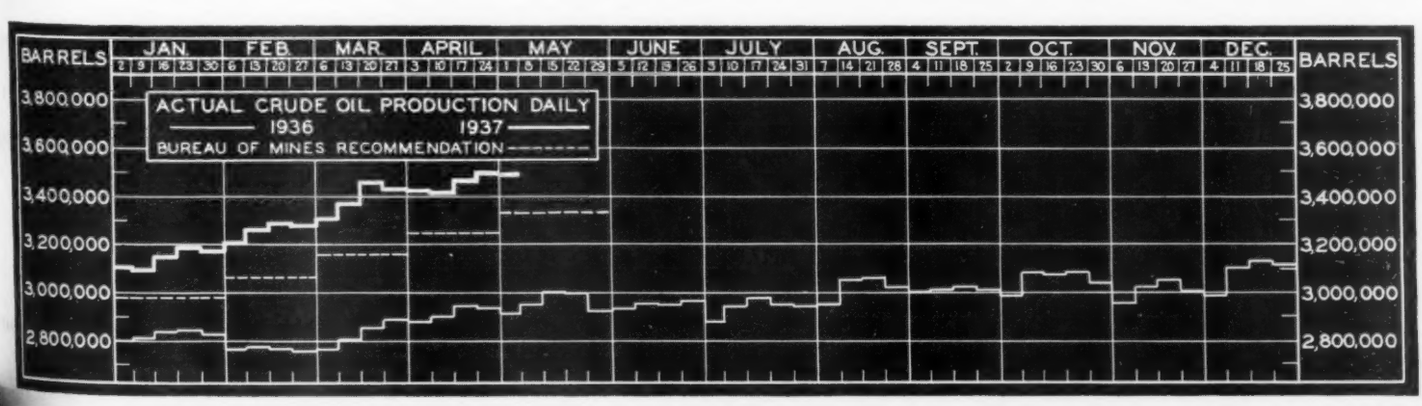
Low temperatures and rain are said to be holding back consumption in eastern and middle western states, and this has tended to reduce gasoline shipments from refineries to bulk terminals. Gasoline tankcar prices generally are firm. In Ohio, Standard of Ohio was forced to rescind its action of the previous week in advancing tank-wagon and service station gasoline.

Daily Average Production for Week

	May 1, 1937	Bur. Mines May est.	May State allowable	Apr. 24, 1937
Oklahoma City	174,525	.....	.....	172,400
Fitts	96,500	.....	.....	98,900
Remainder of State	394,575	.....	.....	399,350
Total Oklahoma	665,600	622,700	622,700	670,650
East Texas	463,248	.....	.....	462,350
West Texas	199,593	.....	.....	199,298
North Central Texas	103,299	.....	.....	103,500
Texas Panhandle	78,796	.....	.....	81,597
East Central Texas	118,250	.....	.....	113,450
Gulf Coast Texas	323,798	.....	.....	322,450
Southwest Texas	104,948	.....	.....	102,940
Total Texas	1,391,932	1,340,800	1,411,236	1,385,585
North Louisiana	73,625	.....	.....	72,450
Gulf Coast Louisiana	178,350	.....	.....	176,750
Total Louisiana	251,975	249,400	240,900	249,200
California	622,400	583,300	*603,900	629,350
Kansas	198,350	187,100	187,100	197,925
Arkansas	27,620	28,500	.....	27,460
Eastern Fields	114,300	117,400	.....	115,200
Michigan	46,866	34,900	.....	46,634
New Mexico	106,010	99,800	106,400	106,410
Rocky Mountain	72,640	69,000	.....	72,870
Total United States	3,497,693	3,332,900	.....	3,501,284

Decrease of 3,591 bbls. daily.

*Recommendation of Central Committee of California Oil Producers.



SPARKS FROM THE NEWS

The unusual is not entirely gone from East Texas. In Kilgore the back end of a store in the business district has been torn down to make room for a derrick. The remainder of the building will be used to house the drilling machinery and slushpit.

Graduate engineers, in contrast with the situation during the depression years, are coming into their own. A.I.M.E. President Allen told Mid-Continent section that in visiting several engineering schools he had found every graduate this year had been offered at least one job.

Electricity is a competitor of oil and natural gas at many points, but it is also an important customer. For the first quarter, public utility power plants consumed 47,802 barrels of fuel oil and 373,556,000 cubic feet of natural gas daily in generating electricity.

Attitude of employes toward managements in oil industry is indicated in the speed with which they are perfecting new organizations conforming with Wagner act to bargain collectively with employers following abandonment of previous employe-employer arrangements.

Earnings of 16 representative oil companies increased $20,367,873, or 94 per cent, the first quarter over same period last year. This substantial gain reflects increased volume more than improvement in prices, which were largely offset by higher costs of labor and materials.

Extraneous testimony presented by both sides in the Connally hearing in Washington tends to obscure fact real justification for the act lies in its value in conserving a wasting natural resource.

The plan to organize a selling agency for Mid-Continent independent refiners is based on belief it will provide for orderly marketing of products benefiting refiners, jobbers and consumers.

Mexico, with few well completions and continued labor difficulties, was nevertheless able to boost its production 20 per cent the first quarter to 138,500 barrels daily.

The California refiner who is making sulfuric acid from the obnoxious hydrogen sulfide gas is approaching the ultimate in accomplishments.

Kentucky, along with several other small producing states, is preparing for an active summer. Shallow pays, no proration and low taxes oftentimes result in a small well in these states being more profitable than a potential gusher in other areas.

New home of Mellon Institute of Industrial Research at University of Pittsburgh, dedicated this week. Founded by Andrew W. Mellon and Richard B. Mellon, 26 years ago, oil and gas research has been one of its principal activities

Refinery Workers Organizing to Deal With Management

By GEORGE WEBER

HOUSTON, Tex., May 3.—Employes of the Baytown refinery of the Humble Oil & Refining Co. are rapidly completing the organization of a federation which will enable them to bargain collectively with the company's management concerning wages, hours of employment and other working conditions. The 3,500 employes have been voting for several days on the plan of organization which was submitted to them by a group of fellow employes. While the final result of the pool will not be announced until later in the week, it is known that a large majority of the employes favor the plan. It is believed certain that the vote will give the approval necessary to establish the federation as the bargaining agency in dealing with the management.

Steps to perfect the organization, to be known as the Employes Federation of the Humble Oil & Refining Co., got under way following an announcement 10 days ago by the company ending the joint conference plan, through which the management and employes had negotiated for a period of approximately 20 years. The statement explained that the joint conference plan presumably did not conform with some provisions of the Wagner Industrial Relations act which forbids managements to participate in any manner in organizing employes for the purpose of negotiating with employers regarding working conditions.

Employes at the Baytown refinery by vote several weeks ago indicated their desire to deal with the management through their own organization and not through the C.I.O. or any other outside union. The C.I.O. at that time was starting its campaign to organize the thousands of men employed in Gulf Coast refineries. As soon as the company announced it could no longer negotiate through the joint conference plan, employes took steps to organize independently of the company and in a manner prescribed by the Wagner act and the decisions of the National Labor Relations Board which administers the act.

Method of Organization

A group of 60 employes representing all the principal departments of the refinery perfected a preliminary organization and elected the following employes as officers: W. A. Thomas, president; H. W. Kelse, secretary; Jack Ward, vice president; Paul Alleman, treasurer. The committee membership was confined to regular employes and did not include any foremen, departmental heads and others holding semiexecutive positions who are considered representatives of the management.

Humble Oil & Refining Company at Baytown, Texas

The committee prepared the accompanying ballot and a pamphlet which incorporates the constitution and articles of federation. The articles can be amended if necessary to meet the requirements of the permanent organization. A ballot and a copy of the proposed articles were made available by the committee to every employe, along with a statement which explained the plan of organization. The statement said:

"The joint conference plan of representation for us as employes has ceased to exist. Believing that the majority of the employes desire an employes' organization for the purpose of entering into an agreement with the company as to wages, hours, working conditions, and collective bargaining, we as a group of employes offer, for your consideration and approval, such an organization in the 'Employes Federation of the Humble Oil & Refining Co., Baytown Refinery.' We trust you will read a copy of the constitution and general rules which is handed you herewith, and make your decision after careful consideration for your own personal interest and that of your fellow employes.

"Realizing that such a plan must have an organization in the beginning, we whose names appear below, have formed a temporary organization and have elected temporary officers to serve until an election can be held where each department in the refinery may elect representatives for the permanent organization. This election shall be held not later than the second week in June.

"A copy of the ballot is in your hands. Please fill out the ballot as you desire. If you do not favor the organization, it is not necessary to fill out the lower section of the ballot marked 'Membership' but vote the upper part anyway, as we desire to get an expression from all employes. Ballot boxes will be placed

Employees Ballot

(SCRATCH THE ONE YOU DO NOT APPROVE)

1. I APPROVE THE ORGANIZATION OF THE EMPLOYEES FEDERATION FOR THE PURPOSE OF BARGAINING COLLECTIVELY WITH THE COMPANY.

2. I DO NOT APPROVE THE ORGANIZATION OF THE EMPLOYEES FEDERATION FOR THE PURPOSE OF BARGAINING COLLECTIVELY WITH THE COMPANY.

MEMBERSHIP

(IF YOU APPROVE THE ORGANIZATION, PLEASE FILL IN THE FOLLOWING:)

I hereby signify my desire to be a member of the Employees Federation and approve the officers and committee, as named, as the temporary governing body to act until such time as an election can be held for permanent representatives.

Name _____

Department _____ Number _____

4

Employes Federation of the Humble Oil & Refining Co., Baytown Refinery

ARTICLE I. PURPOSE

Section 1. The employes of the Humble Oil & Refining Co. at the Baytown refinery do, by the formation of the Employes Federation provide a means whereby such employes, through their duly elected representatives, may bargain collectively with the company and discuss and settle with the company such matters of mutual concern as wages, hours and working conditions.

ARTICLE II. NAME

Section 1. The name of this organization shall be Employes Federation of the Humble Oil & Refining Co.

ARTICLE III. ORGANIZATION

Section 1. Each employe of the Humble Oil & Refining Co. in the Baytown refinery (except those employes in an administrative capacity and department foremen and assistant department foremen, or any others so designated from time to time by the council of elected representatives) shall be eligible for membership in this Employes Federation.

Sec. 2. Such employes shall elect representatives, as hereinafter provided. These representatives shall constitute the governing body of said Employes Federation and shall be hereinafter referred to as the central council, or council.

Sec. 3. The officers of said Empolyes Federation shall consist of a president, vice president, secretary-treasurer, to be elected by the council from its membership.

ARTICLE IV. ELECTION DIVISIONS

Sec. 1. Election divisions shall be set up to cover each department of the Baytown refinery, and there shall be elected from each such division one representative for every hundred employes, or major fraction thereof, but if any elected division shall contain less than 100 employes, then one representative shall be elected from each such division.

Sec. 2. The council by a two-thirds vote shall determine the election divisions and may change such election divisions or the grouping of departments, or may increase the number of representatives whenever necessary to secure complete, fair, and adequate representation.

ARTICLE V. QUALIFICATIONS OF REPRESENTATIVES

Section 1. To be eligible for election as a representative of any election division, such person must be employed therein and have had at least one year's service with the company immediately prior to the election, and must be a citizen of the United States.

Sec. 2. Only those employes eligible for membership as provided in Article III, Section 2, shall be eligible for election as representatives.

ARTICLE VI. ELECTIONS

Section 1. The election of representatives shall be by secret ballot and such election shall be held at such times and places and conducted in the manner herein provided.

Sec. 2. Each person qualified to vote at any election shall be furnished with a blank ballot by the council and the person voting shall write in the name of the person or persons he desires as representatives in that voting division. Only the number of names shall be written on the ballot as there are representatives to be elected. The person or persons (up to the number of such representatives) receiving each a total number of votes exceeding 50 per cent of the number of voters participating in the election in the particular election division shall be declared elected.

If one or more persons (up to the total to be elected) shall not receive each a total number of votes exceeding 50 per cent of the number of voters participating in the election in the particular election division, then there shall be a run-off election. In such case there shall only be two candidates for each position to be filled, and the employes receiving the highest number of votes, excluding any employes declared elected under the terms of the preceding paragraph, shall be such candidates. The winners of such run-off election shall be determined in accordance with the first paragraph of this section.

In no case shall any representative be declared elected who does not receive a total number of votes exceeding 50 per cent of the number of voters participating in the election. No employe shall be declared elected who is not qualified as provided in Article V hereof.

Sec. 3. All representatives so elected shall hold office for one year or until their successor or successors are duly elected.

Sec. 4. The annual election of representatives shall be held during the second week of June of each year.

ARTICLE VII. DEPUTY REPRESENTATIVES

Section 1. Any representative may, subject to the approval of the council, designate, in writing, a deputy representative to serve in case of his absence or incapacity.

Sec. 2. Any representative may, subject to the approval of the council, appoint one or more deputy representatives to assist him in any capacity needed. However, such deputy representatives shall not serve as members of the council.

Sec. 3. The qualification of deputy representatives shall be the same as those of regular representatives.

ARTICLE VIII. VACANCIES IN COUNCIL

Section 1. If any representative leaves the service of the company or the election division or becomes ineligible for any reason stated in Article V, or is absent from more than two consecutive meetings of the council, he shall no longer be a representative and all of his rights and powers as such shall immediately cease The unexpired term of said representative shall in such case be promptly filled by an election in said election division, called by the council and conducted under and according to its direction.

ARTICLE IX. RECALL OF REPRESENTATIVES

Section 1. If any representative becomes unsatisfactory to the members of his election division, the members of such division may upon petition, filed with the council, signed by not less than 51 per cent of all eligible employes of said election division, recall such representative. The council shall thereupon declare the office vacant and call a special election to be held in said election division within fifteen (15) days thereafter where a secret ballot shall be taken to fill said vacancy in the manner provided for in Article VIII.

ARTICLE X. ORGANIZATION MEETINGS AND POWER OF CENTRAL COUNCIL MEMBERS

Section 1. The council shall elect from its members a president, a vice president, a secretary and a treasurer.

Sec. 2. The president, or in his absence, the vice president, shall preside at all meetings, and the secretary shall act as secretary of the meetings and record the minutes of all meetings.

Sec. 3. The treasurer shall be the custodian of the funds of the Employes Federation and shall disburse or pay out the same as directed from time to time by the council. He shall prepare and publish a monthly financial statement.

Sec. 4. The council shall elect such committees as may be desirable for the efficient conduct of the business of the federation.

Sec. 5. The council shall hold regular monthly meetings in such places as shall be fixed by the council. Special meetings may be called on three days' written notice by the president, or upon the written request of one-fourth of the members of the council. Committees shall meet whenever necessary, upon the call by the chairman of said committees, or personal notice to each member thereof.

Sec. 6. The majority of the council shall constitute a quorum and no business shall be transacted at any meeting where less than a quorum is present.

Sec. 7. It shall be the duty of the representatives to receive from their constituents all complaints and grievances and to present the same to the proper representatives of the management for adjustment and settlement. If the representative is unable to settle satisfactorily or adjust such matters with the representatives of the management, then the representative shall refer the whole matter to the council for consideration.

Sec. 8. The council may call any member of the Employes Federation to appear before it and give information regarding any complaint, grievance, or other matter under consideration, and shall make such other investigation or obtain such other information as may be necessary for proper determination of the matter before it.

Sec. 9. Voting with respect to any matter before the council need not be by ballot, but upon request of three or more representatives the vote on any matter shall be taken by ballot, and the secretary shall make a record of the vote of each member of the council.

Sec. 10. The council shall have full power and authority for and on behalf of the Employes Federation to negotiate a written agreement with the company providing a method of discussion, adjustment, and settling all matters with respect to wages, hours, or working conditions provided, however, that before executing such an agreement on behalf of the Employes Federation, the council shall submit by secret ballot on whether or not such agreement shall be entered into and such agreement shall be so entered into when approved by a majority of the votes of the employes participating in said voting.

Sec. 11. The council shall have authority, if any agreement is entered into with the company in accordance with the provisions of Section 10 of this article, to negotiate, settle, and agree with the company with respect to any matter referred to it by the representatives; provided, however, the council shall have no power or authority to agree with the company on any change in said agreement, or as to any general change in wages, hours, or working conditions which affect the whole or a majority of the members, until such proposed changes are approved by a majority of the members of the Employes Federation.

Sec. 12. The council shall have such other powers, duties and authorities as may be necessary to accomplish the purposes herein set forth.

Sec. 13. Nothing herein contained shall limit, restrict or prevent any employe or group of employes from taking up direct with the company any individual complaint or grievance.

Sec. 14. No officer or representative shall be paid or shall receive from the Employes Federation any salary or compensation for services performed for the Employes Federation by such officers or representatives.

ARTICLE XI. FINANCES

Section 1. Such funds as may be necessary to carry on the business of the federation shall be raised from time to time in such manner as may be determined by the council who shall have authority to assess each member of the Employes Federation one dollar ($1.00) each fiscal year. Any additional assessments shall only be made upon approval of a majority vote of the members of the Employes Federation but in no event shall the assessments exceed a total of five dollars ($5.00) per member per year.

ARTICLE XII. AMENDMENTS

Section 1. The articles of the Employes Federation herein set forth, or any provisions thereof, may be changed at any time by an amendment hereto. Said proposed amendment shall be submitted in writing to the council and no action shall be taken thereof until thirty (30) days after said amendment is so submitted, and if approved by the council at any regular or special meeting by a two-thirds vote of all members of the council, said proposed amendment shall be presented for the approval of the members of the Employes Federation and if approved by a majority vote of all the members participating in said voting, said amendment shall be adopted as an amendment to said articles of the Employes Federation.

Section 2. If and when a proposed amendment is approved by the council, copies thereof shall be made and these copies shall be furnished to each representative for distribution to the members of the Employes Federation of his election division at least fifteen (15) days before the time fixed for any action thereof by the members.

outside the clock office gates, beginning at 3 p.m., Tuesday, April 27. These boxes will be in the same location each day through Saturday, May 1, from 7 a.m. to 9 a.m., and from 3 p.m. to 5 p.m., daily.

"We believe that this is the most democratic plan which can possibly be devised and that it will give adequate representation for each and every employe.

"Again, may we urge you to read and study carefully the proposed plan and vote as you desire."

Hold Mass Meeting

The plan of organization was completed by the committee on Tuesday, April 27, when the ballots and pamphlets were prepared. W. A. Thomas, the temporary president, presided at a mass meeting held Wednesday night, April 28, in the high school stadium in Baytown. Mr. Thomas explained the plan at that time. Regarding its objectives he said:

"The Humble company voted last week to discard the joint conference plan of representation because similar organizations have been found contrary to the Wagner labor act provisions."

"A group of about 60 men met at the Baytowr Community House Monday night, and set up plans for a temporary organization in the belief that the majority of the workers of the refinery would rather be represented by an organization of their own, guided by fellow workers, than become a partnership to an organization controlled by outsiders and be told what to do.

"We've laid our cards on the table, printed our own constitution and by-laws. They are not final. Any changes can be made, and the official staff is only temporary. We have not set up ourselves as a bargaining agency. We hope merely to obtain an indication of whether the majority of the workers of the refinery want the federation to represent them with the company for collective bargaining purposes. If that is determined by the straw vote now in progress, an election will be held as soon as possible to elect representatives to a governing council from every department in the refinery, with one representative to each department's 100 workers, or less."

Since Wednesday the vote of employes has indicated an overwhelming majority favor the new plan. When the final vote is announced, the next step, as explained by Mr. Thomas, will be to select the council members, who in turn will elect the permanent officers.

It is believed the permanent organization will be perfected this week. The federation then will be in position to notify the Humble company that it desires to negotiate covering future employment conditions as provided for under the Wagner act. Since the federation will represent a majority of the employes at the refinery, the company under the act will be required to recognize it as the sole bargaining agency so far as employes are concerned, in the operation of the refinery.

Indiana Employes Organizing

Reports the first of the week indicated refinery employes of Standard Oil Co. (Indiana) were organizing workers' units to negotiate with the management relative to future working conditions. Negotiations in the past have been carried on through the Industrial Relations Plan which the company established 18 years ago.

The plan become inoperative last week through action of company officials who felt it did not meet the requirements of the Wagner act as a medium for carrying on negotiations between the management and employes dealing with wage scales, hours of employment and other working conditions. Regarding this situation President Edward G. Seubert of the Standard company in a letter to employes explained in part:

"Recent legislation sustained by the courts apparently indicates that the present plans will not permit it to remain operative. The principal legal objections seem to be that the plans were originally proposed by the company and it appoints half the representatives and the entire expense is borne by the company.

"The management therefore regretfully announces that it has no option other than to discontinue bargaining through the joint general committees."

The letter, dated April 24 and signed by Edward G. Seubert, president, stated that any employe or group of employes were at liberty to "select representatives to propose and discuss with the management any method or plan for collective bargaining."

N.L.R.B. Members in Spotlight

Great interest has been shown in the personnel of the National Labor Relations Board since the Supreme Court validated its decisions under the Wagner act. Very little attention was paid to the board when it was created, and its three members were not of national prominence.

The chairman is J. Warren Madden, on furlough from the law faculty of the University of Pittsburgh. He is 47, a native of Illinois, and was educated at the University of Illinois and the University of Chicago. He practiced law in Illinois and has served on the law faculties of the University of Oklahoma, Leland Stanford University, Ohio State University, Cornell University, University of Chicago, University of West Virginia and University of Pittsburgh. He was named by the governor of Pennsylvania on a special commission to investigate the private police systems of the steel and coal industries in that state, and joined in a recommendation company police be abolished by law. He also served on a board which arbitrated a Pittsburgh street car strike. His work on these assignments brought him to the attention of the American Federation of Labor, which recommended his name to President Roosevelt.

Donald Wakefield Smith, 38, is also a lawyer. He is a nephew of the composer, Charles Wakefield Cadman, and son of a foreman in a Pennsylvania steel plant. He grew up in Homestead, Pa., and worked in the steel mills during school vacations. He graduated from the University of Pittsburgh and received a law degree from Georgetown University in Washington. He practiced law in Washington, specializing in labor and immigration cases until appointed to fill a vacancy on the board last fall.

Edwin S. Smith is not a lawyer. He is 46, a native of Brookline, Mass., and a Harvard graduate. He served on the social research staff of the Russell Sage Foundation and became personnel manager of the Filene department store in Boston. In 1931 he became commissioner of labor of Massachusetts, which brought him into contact with Frances Perkins, secretary of labor, who was responsible for his appointment to the old National Labor Board which was charged with enforcement of the NRA section 7(a). When the Wagner act was passed he was appointed to the NLRB. He is said to be less concerned with the legal technicalities than his colleagues, and to conduct hearings in a very informal manner. He has a background of social research and is particularly concerned with preserving the civil liberties of employes.

The Wagner act has set up the National Labor Relations Board with extraordinary powers. Its three members draw salaries of $10.000 a year each and, after initial terms of one, three and five years, they hold office for five years.

The general counsel of the board, Charles Fahy, became known to the oil industry as chairman of the Petroleum Administrative Board under Secretary Ickes. He is 45, a native of Georgia. He directed the test cases which resulted in the Wagner act being held constitutional, and is credited with a large influence in formation of the board's policy. (Photo by Harris & Ewing.)

National Labor Relations Board: Donald W. Smith, Edwin S. Smith, and Chairman J. Warren Madden

Mid-Continent Refiners Plan Selling Agency

Plans for a selling agency to handle the output of a group of Mid-Continent refineries will be acted upon at a meeting to be held in Tulsa May 27. The principal features of the sales organization which have been under consideration for several weeks were presented to an interested group of nonintegrated refiners at a meeting held last week in Hot Springs, Ark., in connection with the annual meeting of the Western Petroleum Refiners Association.

At the Hot Springs meeting Albert Finston, vice president of the Bell Oil & Gas Co., Tulsa, was appointed chairman of a committee which will make a further study of practical and legal phases of the plan with the expectation that final action can be taken at the Tulsa meeting later in the month. Other members of the committee are A. E. Landsittel, Globe Oil & Refining Co., Wichita; A. F. Reed, Lion Oil Refining Co., El Dorado, Ark.; P. O. Hardwick, Atlas Pipe Line Co.; O. W. Crick, Danciger Oil & Refineries, Inc.; L. E. Kincannon, Rock Island Refining Co., Duncan, Okla., and B. J. Majewski, Deep Rock Oil Corp.

The draft of the plan was presented at Hot Springs by Mr. Majewski, who has been prominently connected with the work of independent refining and marketing organizations for several years and who has made a special study of the possibilities of a cooperative selling agency in disposing of the products of independent refining organizations. The plan of organization now proposed which was explained in detail in a booklet available to those interested in the proposal, is similar to that used in the coal industry by Appalachian Coals, Inc. The latter was upheld by the U. S. Supreme Court.

Non-Integrated Operators

It is understood that sponsors of the plan feel that a large majority of companies operating 150 refineries in the Mid-Continent area will be interested in the selling agency plan. Large companies whose operations are integrated and which are classed as "majors" would not participate in the organization. The plan aims to interest those operators whose plants are within the Mid-Continent field and who in most cases are compelled to compete with larger companies whose plants are located in the Middle West consuming area. Those which have the advantage of gasoline pipe line systems connecting Mid-Continent refineries to terminals located in the Middle West are also given the "major" classification.

It is contended that companies which operate plants adjacent to the fields and are compelled to ship their finished products by rail over long distances have become more and more handicapped in competing with the larger companies which have the advantage of pipe line transportation and large producing facilities.

Objectives

Regarding the objectives the plan of organization states:

"The authors, in recommending the organization of the agency, do so with the hope of bringing about a better and more orderly marketing of petroleum products from the region to be served by the agency and better enabling refiners in this region, through the larger and more intensive and economic facilities of such selling agency, more adequately to compete in the general markets for a fair share of the available business. At present the independent refiners in this region are greatly handicapped by the lack of substantial, well-equipped and well-managed selling agencies with sufficient organizations and funds at their command properly to develop the markets and demand from this region, and properly to sell and merchandise their products in competition with petroleum products from competing fields, as well as against the ever-increasing competition from the large and powerful integrated oil companies (hereinafter referred to as the majors) in their own and competing regions. As individual units, the independent refiners in this region have been and are now unable to carry on proper and extensive advertising campaigns and other means of holding and developing markets for their products. This inability is one of the contributing causes to the great decline in the volume of jobber and dealer business previously enjoyed by these refiners, most of which has been yielded up to the pipe line refiners (major companies), during the past seven years."

Organize Company

The plan proposes to organize the Great American Oil Co. The details of certificate of incorporation, the by-laws, stock subscription agreement, contracts to be entered into between the company and the individual refiner, and its subagents were explained at the meeting last week. Those participating in the plan will subscribe to the stock of the company and participate in the management. It is proposed to have not less than three members of the board of directors from each of the following states: Arkansas, Kansas, Louisiana, Oklahoma and Texas. Five directors will be elected at large. The company will be organized on a scale to handle the sales of participating companies. The company eventually will handle all contract as well as spot sales.

Benefits

The probable benefits to the participating refiner through the successful organization and operation of the selling agency are outlined as follows:

"To create and establish a larger and more attractive market for the petroleum products refined in this region (Mid-Continent) by better advertising, together with better demonstration of their advantages by competent technical and combustion engineers.

"By virtue of the larger volume of products handled through the agency to allow all subscribing refiners to share in and compete for the larger and more attractive independent business in all primary markets.

"By balancing grades to prevent dumping of any grade of products at any time.

"By adequate information as to the needs of industries and as to the competition of other regions, to obtain the best available prices for all products, based upon the merit of the product sold, as against the present system of selling petroleum products blindly without adequate information as to the needs of the consumer or the competition of other refiners.

"To give petroleum consumers purchasing from this region the assurance that they are buying their requirements on a fair competitive price basis, and are paying no more for similar products and service than is being paid by their competitors, and thus secure for the independent refiners in this region, permanently, business that is now part of the time going to other fields.

"To standardize the grades and quality which the agency will sell.

"To conduct technological research on a cooperative basis and represent the subscribers at all times where efforts are made to change present standards of specifications to the detriment of the agency members.

"Positively to eliminate the existing "rumor factory" as between members of the agency.

To Increase Use

"To increase the use of petroleum products by protecting its jobbers and dealers with fair uniform prices for different grades of products and thus give the jobbers and dealers an opportunity to buy, sell and merchandise the agency products without the fear of sustaining serious losses due to dumping from the same refiners in the same markets.

"To protect the refiners from serious credit losses by being able to get more adequate reports on the responsibility of the various consumers.

"Ultimately to reduce the cost of sales to the independent refiner by the elimination of duplication of service, by balancing grades, by standardizing specifications and quality, and by giving the independent refiners more uniform running time for operations as the result of better distribution of orders; hence, a lower cost of production.

"To permit coordination of agency members' inventory position on all grades of products, thus eliminating distress materials and the necessity of dumping at below cost realization.

"By the elimination of dumping and more intelligent selling as outlined herein, to increase the realization to the independent refiner to a level that will enable said refiner to pay labor as high a wage as competitive conditions with petroleum products in more favorably located freight rate zones or regions will permit."

Officers Elected

Research engineers and visitors to the three-day annual convention of the Western Petroleum Refiners Association praised the choice of C. M. Boggs, as president for the association for the coming year. Mr. Boggs is president of the Kanotex Refining Co. and has actively headed the association over the past year. With a unanimous vote he was chosen to fill that chair for another year.

Other officers chosen include H. T. Ashton, manager of the Lubrite division of Socony-Vacuum Oil Co. as executive vice president and the vice presidents chosen include Roy B. Jones, president of the Panhandle Refining Co., T. M. Martin, vice president of the Lion Oil Refining Co. and R. W. McDowell, vice president of the Mid-Continent Petroleum Corp.

In the entire list of officers, only one change occurred from the group elected a year ago and that was in the case of T. M. Martin who took the place of Col. C. R. Barton of the same company.

Exhibiting the appreciation common to all who attended the convention, the resolutions committee offered three propositions before the assembly, all of which were acted upon favorably. These included a resolution which complimented those in charge of arranging the affairs of the convention, another resolution thanked the manufacturing committee for having prepared an unusually interesting series of technical papers and discussions and the third resolution called for naming George Locke, well known for his active work in the association, as a life-long member of the association.

Stabilization Seems Assured in California Oil Markets

By L. P. STOCKMAN

LOS ANGELES, May 3.—The Oil industry in California after several years of overproduction, unsettled marketing conditions and depressed earnings, appears well on the road to recovery. The outlook for the remainder of the year is quite promising and every indication points to controlled production, with certain limitations, and a stabilized market for gasoline and other refined products. Consumption of gasoline on the Pacific Coast has shown a consistent increase for several years and, with stabilization of crude and refined oil prices, marketers should show greatly improved financial statements. Five California fields, Greeley and Ten Section in Kern County, Santa Maria Valley in Santa Barbara County and El Segundo and Wilmington in Los Angeles Basin, are in the ascendancy at present but only Wilmington is expected to exert any great effect on state production as the others are in strong hands for the most part.

The Wilmington field is producing about 26,000 bbls. per day at present and should reach a higher level unless operators clamp down the lid tighter, as 43 potential producers are scheduled for completion within 30 days. The oil averages around 18 degrees and should not upset the present equilibrium between supply and demand as heavy crude and fuel oil stocks have shown a substantial reduction during the past year. A number of wells in the Santa Maria Valley field went on commercial production for the first time a week or so ago and operators are adhering strictly to their quotas. In addition to handling its own production, Union Oil Co. is purchasing the allowable of wells completed by independent operators.

For the first time in almost a decade, marketing conditions on the Pacific Coast can be viewed with equanimity and executives in close touch with the situation are quite optimistic. Periodic price disturbances which have characterized marketing conditions have been conspicuously absent during the year to date and as a consistent increase in consumer demand may be anticipated during the next six months prices should be uniformly stable. Gasoline consumption in Pacific Coast territory is expected to be approximately 8 per cent above commercial sales last year and if crude production is kept within bounds higher prices may be expected for both crude and gasoline.

Sales of motor fuel in California during the first quarter of 1937 totaled 389,129,886 gallons compared with 384,270,775 gallons during the same period last year, a gain of 4,859,111 gallons during the lowest consumption period of the year. Gaso-

Air view of Standard Oil Co. of California refinery at Segundo near Los Angeles

line sales last year increased to 396,506,063 gallons in the second quarter and jumped to 429,837,041 gallons in the third quarter. Reflecting conclusion of the usual seasonal demand, gasoline sales declined to 415,180,073 gallons in the fourth quarter. If gasoline sales in California show the anticipated increase of 8 per cent, marketers will sell approximately 1,746,000,000 gallons during 1937 as the anticipated increase approximates 120,000,000 gallons. This expected increase is more than the entire gasoline sales in California during February which aggregated 115,943,267 gallons. The effect of possible strikes on gasoline consumption during the year is problematical.

Tanker Shipments

Intercoastal shipments of refined oil from California to Atlantic and Gulf Coast ports for domestic consumption during the year to date are substantially below liftings during the same period in 1936 and this is expected to continue during the next several months. This is a reflection of abnormally high tanker rates and the fact that California marketers are reluctant to dispose of any considerable quantity of refined oil at or below present prices. Diesel and gas oil shipments are slightly higher this year but gasoline shipments are only about one-third those moved to the East Coast during the same time in 1936. Export shipments of crude and refined oils are substantially higher and a recent check indicates the total exports during 1937 will be considerably higher. Most of California's exports during the current year were to Japan, although one or more cargoes of refined oil have been shipped to England, Australia, New Zealand, Russia, China, Manchuria, Chile, Mexico, British Columbia, Venezuela, Curacao, Rotterdam, Amsterdam, San Salvador, Panama and other Central American ports. Early in May, Union Oil Co. will ship the first of three cargoes of Santa Maria Valley crude to Belgium and recent developments indicate a strong possibility several additional cargoes will be lifted this year. Shipments of crude and refined oil from Bahrein Island to Japan, which have been consistently increasing, have reduced California shipments to the Orient and, while this movement will ultimately become a factor of greater importance to California marketers, the displacement of California oil by Bahrein petroleum has been slower than the decline that has taken place in California crude production during the same period.

Exports Increase

Indications that the Japanese government's decree that oil marketers maintain a six months' supply of petroleum at all times has reached the stage where storage facilities are now available, is seen in the increase of shipments of crude and products from California to Pacific foreign ports during March, when a gain of over 41,449 bbls. daily was recorded over February. Pacific foreign shipments for the first quarter were 36,666 bbls. per day in excess of similar shipments for the same period last year. Executives of the Oil Producers Agency of California believe some of this increase reflects a probable relief in labor disturbances in South America plus a lessening in the building up of probable war-time stocks in Europe. This was indicated during March when tanker shipments from California to Atlantic foreign ports dropped from the previous high of 41,745 bbls. and 34,326 bbls. per day respectively during January and February to 18,766 bbls. daily for March. This represents an increase, however, over the corresponding month of last year of 4,559 bbls. per day.

The first quarter of 1937 witnessed the greatest total of shipments for any first quarter since 1930 when total offshore tanker shipments of petroleum and products from California to points outside Pacific Coast territory excluding Alaska, Hawaii and the Canal Zone amounted to an average of 173,796 bbls. daily. This is a gain of 43,437 bbls. per day over the 1936 first quarter daily average of 130,359 bbls. Intercoastal shipments registered a decline for the first quarter of 12,656 bbls. daily compared with the first quarter of 1936. Total liftings for these periods were 10,220 bbls. and 22,876 bbls. per day respectively.

Total offshort tanker shipments from California to points outside Pacific Coast territory during March averaged 181,702 bbls. daily compared with 145,744 bbls. for the corresponding month last year. Total Pacific foreign shipments from California during March exceeded the record of the past eight years when 151,509 bbls. daily were dispatched to Japan and the Far East. This is an increase of 45,008 bbls. daily over March, 1936, shipments and a gain of 24,264 bbls. daily over February, 1937. Intercoastal shipments for March, 1937, amounted to only 11,427 bbls. per day compared with 25,036 bbls. daily during the same month of 1936, a decrease of 13,609 bbls. Intercoastal shipments for February, 1937, were 7,953 bbls. daily indicating an increase for March of 3,474 bbls. per day.

Total stocks in Pacific Coast territory, comprising crude and refined products, have been reduced 10,241,458 bbls. during the past year, declining from 136,438,584 bbls. March 31, 1936, to 126,197,126 bbls. March 31, 1937. Refining crude oil stocks showed the greatest reduction, followed by unfinished oils and naphtha distillates. The former declined 6,302,335 bbls. and the latter 3,298,937 bbls. Stocks of natural gasoline increased 496,259 bbls. during the past year but finished gasoline increased 1,916,496 bbls., rising from 12,564,458 bbls. on hand March 31 of last year to 14,480,954 bbls. The increase in finished gasoline and the decrease in light refining crude oil is due to the fact that refiners have found it more advantageous to run crude oil to stills and store the residuum in reservoirs and the refined products in steel tanks. This practice minimized evaporation losses, removed the necessity of building additional storage facilities, and permitted greater flexibility of operation. At the close of February, 1936, there was a distinct shortage of steel tanks but this has been eased up and no difficulty should be experienced during the next several months unless production increases beyond expectations. The aggregate storage facilities available at present is substantially lower than during the years of peak stocks due to abandonment of numerous reservoirs. During the peak years operators stored crude in concrete lined reservoirs but this practice has been discontinued as too hazardous. At present only fuel oil is being stored in reservoirs. Stocks of heavy crude and refinery residuum declined 1,528,350 bbls. during the past 12 months while gas oil and diesel dropped 1,247,570 bbls.

W. M. IRISH RETIRES

W. M. IRISH

W. M. Irish, president of Atlantic Refining Co., retired at the annual meeting in Philadelphia, May 4. R. H. Colley, who has been treasurer of the company, was elected to succeed Mr. Irish as president. E. H. Blum, vice president in charge of domestic production, was elected to fill the vacancy on the board of directors created by the retirement of Mr. Irish. Paul Shuman, formerly assistant treasurer, was made treasurer. R. C. Tuttle, in charge of transportation department, and A. A. Garrabrant, assistant manager of foreign sales, were made vice presidents.

Mr. Irish, who is 69 and eligible to retirement four years ago, entered refinery work in Olean, N. Y., after leaving Cornell University. He became assistant superintendent of Solar Refining Co., in Lima, Ohio, a Standard subsidiary, and in 1903 was made assistant manager of the Atlantic Refining Co.'s Point Breeze plant in Philadelphia. Upon dissolution of Standard in 1911 Mr. Irish was made secretary and plant manager. The title was changed to vice president in 1915. In 1927 he was advanced to president.

Refinery Construction

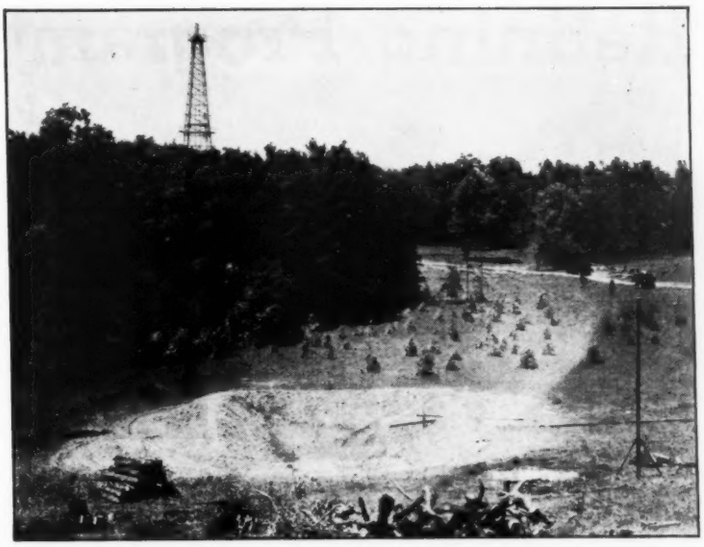
Union Oil Co. is erecting additional distillation units and installing a new cracking plant at its Oleum refinery in the San Francisco Bay region at a cost of $1,900,000. This work is scheduled to be completed within three months. Construction of the cracking plant, which will have a daily throughput of approximately 12,000 bbls. of heavy crude or residuum and a 15,000-bbl. crude distillation unit, was started a month or so ago and work is about two weeks ahead of schedule.

Early this year Tide Water Associated Oil Co. awarded a contract to Alco Products Co., a subsidiary of American Locomotive Co., for construction of a cracking unit at its Avon refinery involving approximately $1,500,000. The new unit, which will be of the tube and tank type, is to have a charging capacity of 14,500 bbls. per day of residuum or heavy crude oil. Operation of this equipment, however, will be in conjunction with existing cracking facilities which will limit the daily charge to a net increase of 7,500 bbls. per day over existing capacity. Residuum or heavy crude oil will be charged in a once-through viscosity breaking stage with vacuum flashing of the evaporator bottoms. The heavy gas oil cut will be cracked in a second stage recycle operation. An existing unit now being used to charge black oil will be revamped for the purpose of cracking the light gas oil yield from the above operation. Specifications call for completion of this projected expansion program before the close of July.

Standard Oil Co. has not undertaken any important new construction in 1937, but completed several units in 1936 including a polymerization process for converting residue gas from cracking units into fuels of a high octane number. Hydrogen sulfide, which formerly was burned with refinery gases, is now recovered at Standard Oil Co. El Segundo refinery for conversion into sulfuric acid, the first installation of this type.

Opelika First Wildcat Well in Henderson

By L. E. BREDBERG



Auxiliary slush pit used when well was cleaning itself

DALLAS, Tex., May 3.—The Glen Rose discovery in the Opelika area in the northeastern part of Henderson County is not yet a producing well, but when tested on April 27 it produced sufficient oil and gas to show it will make a well and be the first wildcat discovery for the county. True, there is production in the southwestern part of the county where the Cayuga field has extended over from the northwestern part of Anderson County, but the first well drilled in Henderson County in that field can hardly be termed a discovery as it was really an extension well.

Tide Water Associated Oil Co., Seaboard Oil Corp. and Humble Oil & Refining Co. No. 1 McElreath & Suggett, in the W. P. Wyche Survey, 1½ miles northwest of the crossroads town of Opelika, 14 miles northeast of Athens, 20 miles southwest of Tyler, 1 mile west of the Cotton Belt Railroad and 1½ miles northwest of the Athens-Tyler highway, was tested under a big handicap on April 27. On account of high pressure, which reached 1,450 pounds on the casing after the gas and oil were struck at 7,185 feet and the well shut in at 7,195 feet, with only 1,771 feet of 13⅝-inch casing in the hole, about 125 tons of 13-pound commercial mud was pumped into the hole to keep it from blowing out and getting out of control.

The operators had not subscribed for more casing because, it is reported, they were skeptical about the well making a producer. The operators decided to leave the drill pipe in the hole after the crew started pulling it and it stuck 35 feet off bottom. This set up another handicap, and when the well was opened the afternoon of April 27, mud, with only a little oil, flowed through the 2-inch line into the slushpit. It flowed this way for about three hours and then was turned through a 4-inch line to an auxiliary slushpit which had been dug some distance from the well, reducing the danger of fire.

Well Improves

The well then started heading more oil, making an estimated 60 bbls. a day. The oil tested 34 gravity, with four points mud. The following day another gravity test was made, showing less mud with the oil and the crude testing 37.5 degrees, corrected, making the appearance of the well much better.

On the evening of April 27 the gas, which was not gauged, ceased flowing and the well fell to about 40 bbls. a day, making about this much the following day. This was believed due to the fact that the large quantity of mud pumped into the hole had cemented off about all of the pay formation, or had become sealed in the hole, the only openings through which it and the oil could come up through the drill stem being the three-seven-tenths inch holes in the rock-bit on the bottom of the stem. The operators then ordered out 1¾-inch drill stem to be rigged up for milling off the bit. This is expected to give a full opening at the bottom of the drill stem and allow the hole to clean itself much easier. It will be several days before results can be determined.

The only two other Glen Rose producers in the East Central Texas district are in the Cayuga field. They also belong to Tide Water and Seaboard. They are producing gas and distillates only.

This area had five Woodbine sand tests, one of which went to the Georgetown, but none of them proved a producer, and the structure was given up as dry until the Cayuga Glen Rose distillate discovery was made two years ago, after which major companies and others started leasing the better-looking structures which had received Woodbine tests, expecting later to drill deep tests, as was done in this area. This deep strike on such an old tested structure will prompt the drilling of deep tests in other areas in the district, and available Henderson County land has been almost entirely leased up since the showing was made in this discovery, the play extending into surrounding counties. Around 112 dry holes have been drilled in Henderson County alone, this deep well being the first test in the county to prove productive from any of the pay horizons found in the district.

This deep strike will revive interest in the district, especially from the standpoint of deep wildcats, for during the past year and since the Talco and Rodessa discoveries in the northeastern part of the district many deep dry holes have been drilled, especially along the fault line. The Sulphur Bluff field is the only one opened since the Talco strike and many were beginning to lose interest.

Possible Outlets

The Magnolia Pipe Line Co.'s main 12-inch line from the East Texas field to Corsicana, thence south to the Gulf Coast, passes within about 6 miles to the southeast of the well, and the Pure-Van Transportation Co.'s 8-inch main line from the Van field to Smiths Bluff passes within about 10 miles to the northeast. The Magnolia is expected to connect with the discovery when it is completed.

As the three companies owning the well hold a third working interest in the block of 12,000 acres surrounding the well, they are expected to develop it slowly and systematically. The structure is said to have a closure of between 500 and 600 feet, which made it one of the best-looking bets in the district.

The terrain in the area is similar to that of the East Texas field, the well itself being in a marshy creek bottom, through which $1,700 worth of corduroy road had to be built in order to haul in the rig equipment and supplies for the drilling. The surrounding hills are covered with deep soft sand, also adding to hauling troubles and expense.

The nearest oil well supply houses are in the East Texas field, at Arp and Kilgore, with some others in Palestine. Quick transportation of equipment from factories and large warehouses in Houston is possible because Opelika is on a main hard surfaced highway from that concentration point.

Tide Water Associated, Seaboard Oil Corp. and Humble Oil & Refining Co. have already moved in land and geological offices at Athens, the county-seat, where all lease and royalty transactions have to be recorded.

One of the three crews of the Harry Bass Drilling Co. Back row: Frank Denton and J. D. Hood, driller. Front row: W. L. Hood, Jim Brooks and S. P. Tutton

Compact Meeting Called

AUSTIN, Tex., May 3. — Chairman Ernest O. Thompson of the Interstate Oil Compact Commission, has called a meeting for May 10 at New Orleans, La.

line sales last year increased to 396,506,063 gallons in the second quarter and jumped to 429,837,041 gallons in the third quarter. Reflecting conclusion of the usual seasonal demand, gasoline sales declined to 415,180,073 gallons in the fourth quarter. If gasoline sales in California show the anticipated increase of 8 per cent, marketers will sell approximately 1,746,000,000 gallons during 1937 as the anticipated increase approximates 120,000,000 gallons. This expected increase is more than the entire gasoline sales in California during February which aggregated 115,943,267 gallons. The effect of possible strikes on gasoline consumption during the year is problematical.

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The first quarter of 1937 witnessed the greatest total of shipments for any first quarter since 1930 when total offshore tanker shipments of petroleum and products from California to points outside Pacific Coast territory excluding Alaska, Hawaii and the Canal Zone amounted to an average of 173,796 bbls. daily. This is a gain of 43,437 bbls. per day over the 1936 first quarter daily average of 130,359 bbls. Intercoastal shipments registered a decline for the first quarter of 12,656 bbls. daily compared with the first quarter of 1936. Total liftings for these periods were 10,220 bbls. and 22,876 bbls. per day respectively.

Total offshort tanker shipments from California to points outside Pacific Coast territory during March averaged 181,702 bbls. daily compared with 145,744 bbls. for the corresponding month last year. Total Pacific foreign shipments from California during March exceeded the record of the past eight years when 151,509 bbls. daily were dispatched to Japan and the Far East. This is an increase of 45,008 bbls. daily over March, 1936, shipments and a gain of 24,264 bbls. daily over February, 1937. Intercoastal shipments for March, 1937, amounted to only 11,427 bbls. per day compared with 25,036 bbls. daily during the same month of 1936, a decrease of 13,609 bbls. Intercoastal shipments for February, 1937, were 7,953 bbls. daily indicating an increase for March of 3,474 bbls. per day.

Total stocks in Pacific Coast territory, comprising crude and refined products, have been reduced 10,241,458 bbls. during the past year, declining from 136,438,584 bbls. March 31, 1936, to 126,197,126 bbls. March 31, 1937. Refining crude oil stocks showed the greatest reduction, followed by unfinished oils and naphtha distillates. The former declined 6,302,335 bbls. and the latter 3,298,937 bbls. Stocks of natural gasoline increased 496,259 bbls. during the past year but finished gasoline increased 1,916,496 bbls., rising from 12,564,458 bbls. on hand March 31 of last year to 14,480,954 bbls. The increase in finished gasoline and the decrease in light refining crude oil is due to the fact that refiners have found it more advantageous to run crude oil to stills and store the residuum in reservoirs and the refined products in steel tanks. This practice minimized evaporation losses, removed the necessity of building additional storage facilities, and permitted greater flexibility of operation. At the close of February, 1936, there was a distinct shortage of steel tanks but this has been eased up and no difficulty should be experienced during the next several months unless production increases beyond expectations. The aggregate storage facilities available at present is substantially lower than during the years of peak stocks due to abandonment of numerous reservoirs. During the peak years operators stored crude in concrete lined reservoirs but this practice has been discontinued as too hazardous. At present only fuel oil is being stored in reservoirs. Stocks of heavy crude and refinery residuum declined 1,528,350 bbls. during the past 12 months while gas oil and diesel dropped 1,247,570 bbls.

W. M. IRISH RETIRES

W. M. IRISH

W. M. Irish, president of Atlantic Refining Co., retired at the annual meeting in Philadelphia, May 4. R. H. Colley, who has been treasurer of the company, was elected to succeed Mr. Irish as president. E. H. Blum, vice president in charge of domestic production, was elected to fill the vacancy on the board of directors created by the retirement of Mr. Irish. Paul Shuman, formerly assistant treasurer, was made treasurer. R. C. Tuttle, in charge of transportation department, and A. A. Garrabrant, assistant manager of foreign sales, were made vice presidents.

Mr. Irish, who is 69 and eligible to retirement four years ago, entered refinery work in Olean, N. Y., after leaving Cornell University. He became assistant superintendent of Solar Refining Co., in Lima, Ohio, a Standard subsidiary, and in 1903 was made assistant manager of the Atlantic Refining Co.'s Point Breeze plant in Philadelphia. Upon dissolution of Standard in 1911 Mr. Irish was made secretary and plant manager. The title was changed to vice president in 1915. In 1927 he was advanced to president.

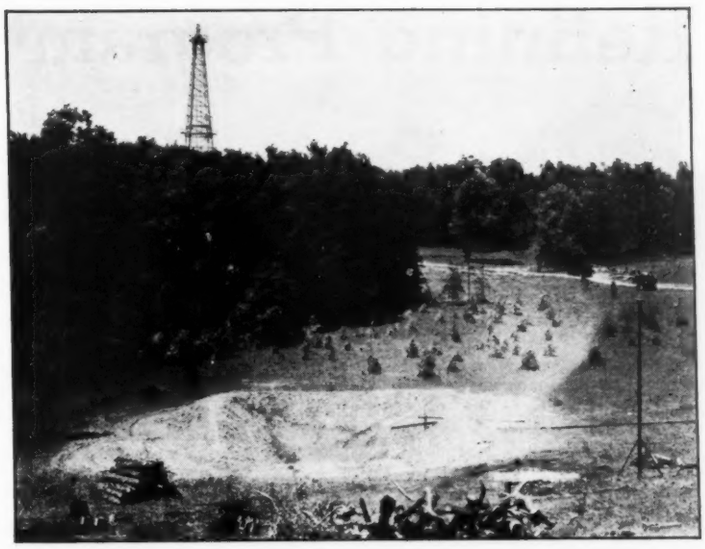
Refinery Construction

Union Oil Co. is erecting additional distillation units and installing a new cracking plant at its Oleum refinery in the San Francisco Bay region at a cost of $1,900,000. This work is scheduled to be completed within three months. Construction of the cracking plant, which will have a daily throughput of approximately 12,000 bbls. of heavy crude or residuum and a 15,000-bbl. crude distillation unit, was started a month or so ago and work is about two weeks ahead of schedule.

Early this year Tide Water Associated Oil Co. awarded a contract to Alco Products Co., a subsidiary of American Locomotive Co., for construction of a cracking unit at its Avon refinery involving approximately $1,500,000. The new unit, which will be of the tube and tank type, is to have a charging capacity of 14,500 bbls. per day of residuum or heavy crude oil. Operation of this equipment, however, will be in conjunction with existing cracking facilities which will limit the daily charge to a net increase of 7,500 bbls. per day over existing capacity. Residuum or heavy crude oil will be charged in a once-through viscosity breaking stage with vacuum flashing of the evaporator bottoms. The heavy gas oil cut will be cracked in a second stage recycle operation. An existing unit now being used to charge black oil will be revamped for the purpose of cracking the light gas oil yield from the above operation. Specifications call for completion of this projected expansion program before the close of July.

Standard Oil Co. has not undertaken any important new construction in 1937, but completed several units in 1936 including a polymerization process for converting residue gas from cracking units into fuels of a high octane number. Hydrogen sulfide, which formerly was burned with refinery gases, is now recovered at Standard Oil Co. El Segundo refinery for conversion into sulfuric acid, the first installation of this type.

Opelika First Wildcat Well in Henderson



Auxiliary slush pit used when well was cleaning itself

By L. E. BREDBERG

DALLAS, Tex., May 3.—The Glen Rose discovery in the Opelika area in the northeastern part of Henderson County is not yet a producing well, but when tested on April 27 it produced sufficient oil and gas to show it will make a well and be the first wildcat discovery for the county. True, there is production in the southwestern part of the county where the Cayuga field has extended over from the northwestern part of Anderson County, but the first well drilled in Henderson County in that field can hardly be termed a discovery as it was really an extension well.

Tide Water Associated Oil Co., Seaboard Oil Corp. and Humble Oil & Refining Co. No. 1 McElreath & Suggett, in the W. P. Wyche Survey, 1½ miles northwest of the crossroads town of Opelika, 14 miles northeast of Athens, 20 miles southwest of Tyler, 1 mile west of the Cotton Belt Railroad and 1½ miles northwest of the Athens-Tyler highway, was tested under a big handicap on April 27. On account of high pressure, which reached 1,450 pounds on the casing after the gas and oil were struck at 7,185 feet and the well shut in at 7,195 feet, with only 1,771 feet of 13⅜-inch casing in the hole, about 125 tons of 13-pound commercial mud was pumped into the hole to keep it from blowing out and getting out of control.

The operators had not subscribed for more casing because, it is reported, they were skeptical about the well making a producer. The operators decided to leave the drill pipe in the hole after the crew started pulling it and it stuck 35 feet off bottom. This set up another handicap, and when the well was opened the afternoon of April 27, mud, with only a little oil, flowed through the 2-inch line into the slushpit. It flowed this way for about three hours and then was turned through a 4-inch line to an auxiliary slushpit which had been dug some distance from the well, reducing the danger of fire.

Well Improves

The well then started heading more oil, making an estimated 60 bbls. a day. The oil tested 34 gravity, with four points mud. The following day another gravity test was made, showing less mud with the oil and the crude testing 37.5 degrees, corrected, making the appearance of the well much better.

On the evening of April 27 the gas, which was not gauged, ceased flowing and the well fell to about 40 bbls. a day, making about this much the following day. This was believed due to the fact that the large quantity of mud pumped into the hole had cemented off about all of the pay formation, or had become sealed in the hole, the only openings through which it and the oil could come up through the drill stem being the three-seven-tenths inch holes in the rock-bit on the bottom of the stem. The operators then ordered out 1¾-inch drill stem to be rigged up for milling off the bit. This is expected to give a full opening at the bottom of the drill stem and allow the hole to clean itself much easier. It will be several days before results can be determined.

One of the three crews of the Harry Bass Drilling Co. Back row: Frank Denton and J. D. Hood, driller. Front row: W. L. Hood, Jim Brooks and S. P. Tutton

The only two other Glen Rose producers in the East Central Texas district are in the Cayuga field. They also belong to Tide Water and Seaboard. They are producing gas and distillates only.

This area had five Woodbine sand tests, one of which went to the Georgetown, but none of them proved a producer, and the structure was given up as dry until the Cayuga Glen Rose distillate discovery was made two years ago, after which major companies and others started leasing the better-looking structures which had received Woodbine tests, expecting later to drill deep tests, as was done in this area. This deep strike on such an old tested structure will prompt the drilling of deep tests in other areas in the district, and available Henderson County land has been almost entirely leased up since the showing was made in this discovery, the play extending into surrounding counties. Around 112 dry holes have been drilled in Henderson County alone, this deep well being the first test in the county to prove productive from any of the pay horizons found in the district.

This deep strike will revive interest in the district, especially from the standpoint of deep wildcats, for during the past year and since the Talco and Rodessa discoveries in the northeastern part of the district many deep dry holes have been drilled, especially along the fault line. The Sulphur Bluff field is the only one opened since the Talco strike and many were beginning to lose interest.

Possible Outlets

The Magnolia Pipe Line Co.'s main 12-inch line from the East Texas field to Corsicana, thence south to the Gulf Coast, passes within about 6 miles to the southeast of the well, and the Pure-Van Transportation Co.'s 8-inch main line from the Van field to Smiths Bluff passes within about 10 miles to the northeast. The Magnolia is expected to connect with the discovery when it is completed.

As the three companies owning the well hold a third working interest in the block of 12,000 acres surrounding the well, they are expected to develop it slowly and systematically. The structure is said to have a closure of between 500 and 600 feet, which made it one of the best-looking bets in the district.

The terrain in the area is similar to that of the East Texas field, the well itself being in a marshy creek bottom, through which $1,700 worth of corduroy road had to be built in order to haul in the rig equipment and supplies for the drilling. The surrounding hills are covered with deep soft sand, also adding to hauling troubles and expense.

The nearest oil well supply houses are in the East Texas field, at Arp and Kilgore, with some others in Palestine. Quick transportation of equipment from factories and large warehouses in Houston is possible because Opelika is on a main hard surfaced highway from that concentration point.

Tide Water Associated, Seaboard Oil Corp. and Humble Oil & Refining Co. have already moved in land and geological offices at Athens, the county-seat, where all lease and royalty transactions have to be recorded.

Compact Meeting Called

AUSTIN, Tex., May 3.—Chairman Ernest O. Thompson of the Interstate Oil Compact Commission, has called a meeting for May 10 at New Orleans, La.

Refining Program Ready for Paris Congress

Thirty-two papers have been prepared in the United States for presentation at the Refining Division of the Second World Petroleum Congress to be held in Paris, the week of June 14, according to Dr. Gustav Egloff, director of research for the Universal Oil Products Co. and chairman of the American committee.

The subjects to be discussed and the authors include:

"Aircraft Fuel Specifications—Present and Future," by G. B. Murphy, W. H. Hubner, and Gustav Egloff of the Universal Oil Products Co.

"A New Diesel Lubricant Using Ten-01 Compound," by A. C. Vobach and M. Fairlie, of the Sinclair Refining Co.

"An Improved P.B.S. Sweetening Process," by C. W. Stratford and D. B. Nutt of the Stratford Engineering Co.

"Catalysis in the Petroleum Industry," by V. N. Ipatieff of the Universal Oil Products Co.

"Chemicals Derived From the Pentanes," by Paul Kendall of the Sharples Solvents Corp.

"Correlation of Octane Numbers with Road Performance," by C. B. Kass, A. J. Blackwood, G. H. B. Davis of the Esso Laboratories.

"Cracking Oils the World Over," Gustav Egloff, Edwin F. Nelson, and J. C. Morrell of the Universal Oil Products Co.

"Deasphalting and Acid Treating in Propane Solution for the Production of Bright Stocks and Cylinder Stocks," by W. H. Bahlke, E. W. Thiele, C. E. Adams, and B. Ginsberg of the Standard Oil Co. of Indiana.

"Diesel-Fuel Specifications—Present and Future," by W. H. Hubner, G. B. Murphy, and Gustav Egloff of the Universal Oil Products Co.

"The Duo-Sol Process as an Instrument for the Reduction of the Overall Costs of Producing High Grade Lubricants," by Max B. Miller of the Max B. Miller & Co., Inc.

"The Economics of Treating and Inhibiting Gasoline," by P. S. Nisson and W. B. Ross of the Pure Oil Co.

"The Effect of Metal Oxides on Paraffin Hydrocarbons," by Gustav Egloff and Herman S. Bloch of the Universal Oil Products Co.

"The Electrical Process for the Extraction of Salts From Refinery Charging Stocks," by T. N. St. Hill and H. C. Eddy of the Petroleum Rectifying Co. of California.

"Improved Lubricants and Lubrication," by Bert H. Lincoln and Gordon D. Byrkit of the Continental Oil Co.

"Inspection and Testing of Pressure Still Equipment," by H. W. Camp and Richard Henry of the Empire Refineries.

"Knowles Coking Process," by Charles W. Andrews of the H. A. Brassert & Co.

"Latest Developments Extend Scope of Cold Acid Treatment of Cracked Naphtha," by C. W. Stratford, F. G. Graves, and E. S. Brown of the Stratford Engineering Co.

"Locating Pipe Lines by Radio," by C. M. Brecheisen of the Socony-Vacuum Oil Co.

"The Manufacture and Use of Asphalts for Low Cost Road Construction in Canada," by R. K. Stratford of the Imperial Oil Refineries, Ltd.

"Manufacture of Asphalt From New Mexico Crude Oils," by Sidney Born of the University of Tulsa.

"Miscibility Relations in Solvent Dewaxing," by Frank W. Hall and B. Y. McCarty of the Texas Co.

"Modern Grease Making," by F. E. Huggins of the Sowers Manufacturing Co.

"Natural Gasoline in the World Motor Fuel Market," by D. E. Buchanan of the Hanlon-Buchanan, Inc.

"New Blending Agents for Aviation Gasoline of 100 Octane Number," by E. Hoffman, M. Lapeyrouse, and W. J. Sweeney of the Esso Laboratories.

"Organic Chemicals From Petroleum and Natural Gas," by M. B. Cooke, C. R. Wagner, and H. R. Swanson of the Pure Oil Co. and Alco Products Co.

"Protection of Underground Pipe Lines," by K. V. King of the Standard Oil of California.

"Recent Progress in Refinery Acid Recovery" by S. F. Spangler of the Chemical Construction Corp.

"Researches on Combustion in the Gasoline Engine," by T. A. Boyd of the General Motors Corp.

"Selective Cracking and Continuous Coking," by James Grant of the Shell Petroleum Corp.

"Solvent Dewaxing and Its Bearing on the Manufacture of Waxes," by R. Lee and E. S. Nicholls of the Socony-Vacuum Oil Co.

"Sulfuric Acid From Refinery Gases," by F. L. Craise and E. S. Brown of the Standard Oil Co. of California.

"Sweetening Gasolines With Copper Salts," by W. L. Benedict, C. G. Dryer, J. C. Morrell, and Gustav Egloff of the Universal Oil Products Co.

AMERICAN DELEGATES TO WORLD CONGRESS

W. G. Skelly, president of the International Petroleum Exposition at Tulsa, shows representatives of the United States and the exposition who will attend the World Petroleum Congress at Paris in June the invitation to be presented to the congress, to hold its 1940 meeting in Tulsa in conjunction with the International Petroleum Exposition. From left to right are: J. Garfield Buell, independent oil operator and chairman of the International Petroleum Exposition Congress tour committee; D. E. Buchanan, head of Hanlon-Buchanan, Inc., chairman of the United States committee appointed by Secretary of State Hull, and also chairman of the International Petroleum Exposition civic committee; Dr. C. K. Francis, consulting technologist, technical editor of The Oil and Gas Journal and an official delegate representing the Tulsa Exposition at the Paris meeting, and W. G. Skelly. From 20 to 40 leading oil men are expected to make the special tour which will include visits to European oil fields conducted under Mr. Buell's direction. The group, in addition to seeking the 1940 congress will invite those attending the Paris meeting and oil men in the European oil centers to attend the 1938 Tulsa Oil Show next May.

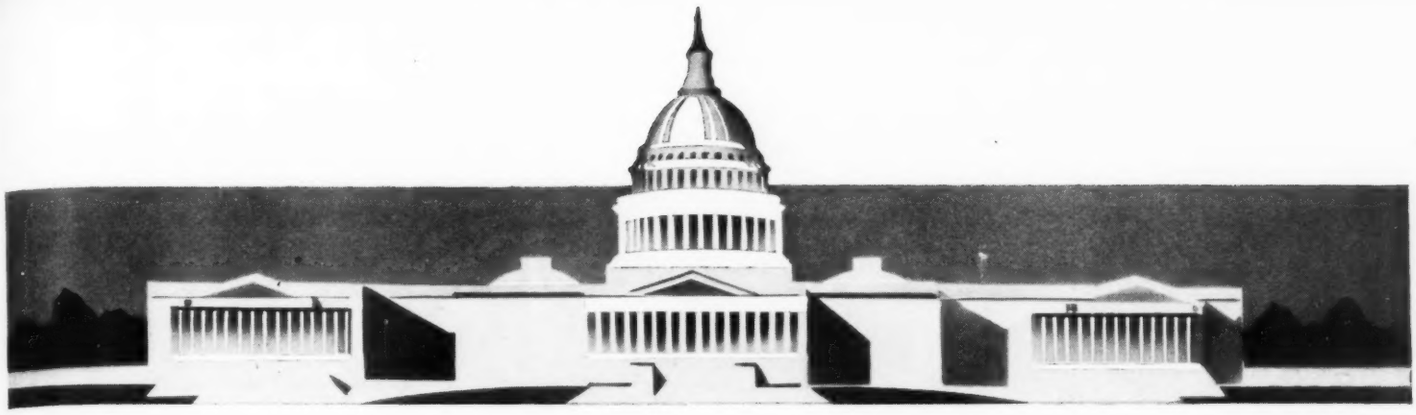
Special Train for A.P.I. Meeting

The midyear meeting of the American Petroleum Institute to be held at the Broadmoor Hotel, Colorado Springs, Colo., June 1-3, promises to attract a large attendance of oil men. To make the trip more enjoyable by traveling with friends and business associates the Santa Fe Railway has scheduled a train to be known as The Oil and Gas Journal Special which will permit leaving Tulsa in the afternoon of May 30, arriving at Colorado Springs early next morning. The equipment will be of latest design Pullman sleepers, including berths, compartments and drawing rooms, also club, dining and observation cars.

OBITUARIES

J. ROSS DAVIS, 50, traffic manager of Humble Oil & Refining Co. and Humble Pipe Line Co., died April 27. He was born in Brenham, Tex., but had been a resident of Houston for 45 years. He had been associated with the Humble company for 19 years and was also president of the Independent Pipe & Supply Co.

DR. ROBERT HEYWOOD FERNALD, dean of the Towne Scientific School at the University of Pennsylvania and formerly active in U. S. Geological Survey and Bureau of Mines work, died at Philadelphia, April 24. He was in charge of the Geological Survey technological branch from 1904 until 1910 and was consulting engineer of the fuel division of the Bureau of Mines from 1910 to 1920.



Attitude of Administration on Business Methods Analyzed

By HENRY D. RALPH

WASHINGTON, D. C., May 3.—The Roosevelt administration appears to be about to launch a campaign against price increases, against the power of business men to influence prices and production, and against bigness in business generally.

In rapid succession this week the administration took three steps which indicate it is going to follow such a course. The first was filing a suit to break up the Aluminum Co. of America on the ground it is a monopoly. The second was a letter from President Roosevelt to congress stopping action on the Tydings-Miller resale price maintenance bill. The third was a letter from the attorney general to President Roosevelt recommending that the antitrust laws be entirely revised and strengthened.

The administration has been severely criticized, whether justly or not, for failure to enforce the antitrust laws and for permitting monopoly in business to thrive. The NRA suspended the operation of the antitrust laws and to a large extent permitted business men to fix prices and regulate production. In the two years since the NRA was invalidated, the administration has done little to enforce the antitrust laws, and many observers concluded the reason was the administration was planning legislation reviving part of the NRA but giving to the government rather than to business groups complete power to regulate prices, define fair trade practices, and maintain competition. Legislation of this general type is still being urged by many administration officials, and it may be President Roosevelt plans to submit it to congress, but in the meantime or perhaps at the same time, the administration will consider revamping the antitrust laws to make them much farther reaching and more drastic than at present.

When the department of justice filed its suit against the Aluminum Co. of America, many expressed the opinion this was largely a gesture designed partly to quiet criticism that the administration is ignoring the antitrust laws, and partly as a publicity build-up for new laws by showing that the present antitrust laws are ineffective against large business organizations. This view was given considerable substantiation by the federal district court in Pittsburgh issuing an injunction restraining the attorney general from further prosecuting the suit which had been filed in the New York District Court. The judge at Pittsburgh based his action on the fact that in 1912 the department of justice brought an antitrust suit against the Aluminum company in that district and the company entered a consent decree under which it agreed to avoid specified violations of the antitrust laws in the future, and this consent decree is still in effect. The recent New York suit is said to involve identical charges with those covered by the 1912 decree, and the judge at Pittsburgh held his court still has jurisdiction and the company should not be subjected to a second trial for the same offenses. The Aluminum company admits it has a monopoly of the production of ingot aluminum in the United States but denies it secured this monopoly by buying its competitors or by other illegal means, and denies it has entered any conspiracies or combinations in restraint of trade. These facts lend color to the charge the administration is opposed to bigness in business as such and to the ability of any business unit or group of business men to dominate an industry even though such domination may not be a violation of present laws.

Price Maintenance

President Roosevelt's attack on the Tydings-Miller resale price maintenance bill was sudden and unexpected. Opponents of the measure had pointed out that as it modifies the antitrust laws and permits manufacturers to fix retail prices it was inconsistent with many of the administration's policies, but the president was not expected to oppose it because it was strongly supported by many groups of independent retail merchants and because the bill had been before congress for a long time without the White House showing the slightest interest in it. There are now 39 states which have laws legalizing retail price maintenance, and the Tydings-Miller bill would simply supplement these laws by permitting manufacturers engaged in interstate commerce to make contracts in such states fixing the prices at which retailers must resell branded merchandise. The bill passed the senate last year, was favorably reported by committees of both house and senate after extensive hearings this session, and the house rules committee had voted to give the bill right of way on April 27.

However, on April 26 President Roosevelt sent a letter to Vice President Garner asking that congress withhold action on the bill "until the whole matter can be more fully explored." As a result it appeared the bill probably would not be passed at this session, although retail groups and members of congress supporting it refused to admit the bill is dead.

The president's letter was accompanied by a memorandum from the Federal Trade Commission, prepared at his request, which pointed out the Tydings-Miller bill would be a reversal of the government's traditional antitrust policy and would permit manufacturers to fix retail prices which would be binding upon all dealers and the consuming public. The memorandum added, "there is great probability that manufacturers and dealers may abuse the power to arbitrarily fix retail prices by unduly increasing prices, resulting in bitter resentment on the part of the consuming public, especially in this period of rising prices."

This paragraph was quoted by the president in his letter, and he added: "The present hazard of undue advances in prices, with a resultant rise in the cost of living, makes it most untimely to legalize any competitive or marketing practice calculated to facilitate increases in the cost of numerous and important articles which American householders, and consumers generally buy. . . . Since we seem to be in a period of rising retail prices, this bill should not, in my judgment, receive the consideration of the congress until the whole matter can be more fully explored."

Antitrust Revision

The attorney general's recommendation for a study of the antitrust laws was contained in a letter to the president in which he announced he would not prosecute steel producers for submitting identical bids on government contracts. He explained identical bidding was caused by adherence to the industry's multiple basing point price system which was approved by the NRA steel code and which has been continued since. Mr. Cummings concluded that "the investigation has not produced sufficient evidence admissible in civil and criminal litigation to make advisable proceedings in court or under the antitrust act, as they have been construed by the courts." He added that the basing point system presents economic and social questions "which the machinery of the courts is not geared to handle" but suggested the Federal Trade Commission might be able to deal with the problem.

Much wider interest, however, was aroused by the following passages from the attorney general's letter:

"The type of practices complained of in this instance is widespread

throughout many of the basic industries of the country. The difficulties in correcting this situation raises the whole question as to the adequacy of the present antitrust laws for the solution of the monopoly problem as it now exists in the United States.

"In my opinion, the time has come for the federal government to undertake a restatement of the law designed to prevent monopoly and unfair competition. This proceeds from the conviction that the present laws have not operated to give adequate protection to the public against monopolistic practices. . . . Moreover, these laws have been subjected to court interpretations which from time to time have limited their application, modified their meaning, and imposed upon the government impossible burdens of proof.

"A long experience with the difficulties of enforcement furnishes a sound basis for improving the enforcement machinery. This department has labored with inadequate means to enforce laws that do not provide sufficient legal weapons to make enforcement effective. In the face of the present tendency to increase prices and the necessity for a corresponding increase in the vigilance of the department, the question is forcibly presented as to whether the country can afford to leave the enforcement of a vital economic policy so poorly sustained. The present machinery of enforcement through the Federal Trade Commission also should be made more adequate and effective, and the devitalizing effect of some of the court interpretations upon its powers should be overcome by legislation.

"I therefore recommend that there be set up a committee to study the antitrust laws as to their adequacy, their enforcement, and the desirability of amendment, extension, and clarification. The committee should have power to enlist the aid of consultant groups both within and without the government, as the studies will naturally cover a wide area including the relation of antimonopoly policies to such subjects as patents, taxation, commerce, manufacturing, farming and labor."

These passages, particularly the last sentence, are considered by many to be of the utmost significance. Some view the letter as only an alibi for the administration's failure to enforce the antitrust laws as they stand, but the prevailing opinion is that it is the first step in the thorough-going revision of federal laws affecting business. In this connection it is recalled the Federal Trade Commission in its recent report on agricultural income recommended drastic revision of the Clayton antitrust act to prevent consolidation and mergers and to make it illegal for a corporation to become larger than a certain fixed size measured in percentage of the total business done by all concerned in the same industry or the amount of capital invested in the industry.

The administration apparently hopes to write a new definition of the term monopoly and to outlaw monopolies or near monopolies which have been legal in the past and which have grown up because of patents, ownership of resources, research, enterprise, service, or any other reason. The object apparently is to give the government the power, heretofore exercised to a greater or lesser extent by business itself, to control prices, production, use of capital, and the nature and extent of competition.

In releasing the attorney general's letter the president said he had not decided just how the recommendations should be carried out but there should be no doubt something would be done about the matter.

John McLister, of Windsor, Ontario, widely known as a Canadian driller in foreign fields, was seriously injured when his car was struck by a train at Bothwell.

N.G.A.A. Final Program for Annual Meeting

Final plans for the sixteenth annual meeting of the Natural Gasoline Association of America, to be held in Tulsa, Okla., May 19-21, have been completed, and the convention promises to be one of the most interesting the association has ever held. Several papers on problems and recent developments of the industry are scheduled to be delivered by outstanding authorities. Two features of the meeting will be the "Operating Kinks" session and the presentation of the Hanlon Award.

The program for the convention follows:

Wednesday, May 19, morning session. Special open meeting of the gas contracts and technical committees.

Afternoon session. Opening address: "Texas' Contribution to the Natural Gasoline Industry," by Col. E. O. Thompson, commissioner, Railroad Commission of Texas.

President's address: T. R. Gobel, Shell Petroleum Corp.

Committee reports: Gas testing committee, gas contracts committee, and technical committee.

Appointment of nominating committee.

Thursday, May 20, morning session. E. L. Peck, Empire Oil & Refining Co., chairman.

"A History of Vapor Lock Research," G. G. Oberfell, Phillips Petroleum Co.

"Present Motor Cars and Their Fuel Problems," E. H. Shepard, Chevrolet Motor Co.

"Precision Gas Analyses," W. F. Fulton, United Gas Public Service Co.

Presentation of Hanlon Award.

Afternoon session. Emby Kaye, Skelly Oil Co., chairman.

"Combined Crude Stabilization, Natural Gasoline and Pressure Maintenance Operations," E. O. Bennett and C. R. Williams, Continental Oil Co.

"The Role of the Free Radical in Polymerization," S. C. Carney, Phillips Petroleum Co.

"Polymerization and What It May Mean to the Natural Gasoline Industry," Dr. G. G. Brown, University of Michigan.

"Refiners' Viewpoint," Stewart Giraud, Humble Oil & Refining Co.

Friday, May 21, morning session. H. W. Harts, Natural Gasoline Corp., chairman.

"Operating Kinks" session. Entirely devoted to the presentation and discussion of original operating ideas submitted by field, plant and laboratory men. Review of late developments.

Afternoon session. "Trends Influencing the Natural Gasoline Industry," by W. T. Ziegenhain, The Oil and Gas Journal.

Presentation of "Operating Kinks" prizes.

Mid-Continent A.I.M.E. Greets National Officers in Tulsa

President R. C. Allen and Secretary A. B. Parsons of the American Institute of Mining Engineers were greeted by a large group of members at the annual meeting of the Mid-Continent section in Tulsa May 3. Both discussed institute matters and President Allen stated he is visiting every college and university where engineering is featured and finds every graduate has employment to go to as soon as the school term ends.

The speaker of the evening was Don R. Knowlton, general production superintendent, Phillips Petroleum Co., Bartlesville, Okla., and his subject was "The Future of Well Spacing." "It is the obligation of the industry to instigate an educational program that will have the effect of obtaining proper legislation to permit the industry to conserve oil reserves and allocate as nearly as possible to each operator his just share of the oil and gas under his property and make it possible for the operator to recover the largest amount of this resource with the minimum of expense," concluded Mr. Knowlton. This paper was discussed by F. W. Floyd, production superintendent, Carter Oil Co.; K. R. Teis, chief engineer, E. H. Moore, Inc., and George S. Bays, chief engineer, Stanolind Oil & Gas Co.

About 100 members and guests were present and the newly elected officers for the Mid-Continent section were announced. They are C. H. Keplinger, chairman, Shell Petroleum Corp., McPherson, Kans.; Austin Allen, vice chairman, Phillips Petroleum Co., Bartlesville, Okla.; A. W. Walker, vice chairman, Stanolind Oil & Gas Co., and C. C. Robbins, secretary-treasurer, Carter Oil Co., Tulsa. The executive committee consists of the elective officers and L. L. Foley, consulting engineer and geologist; M. L. Terry, district petroleum engineer, Texas Co., R. S. Knappen, assistant to president, Gulf Oil Corp., and Harry F. Wright, geologist, Sunray Oil Co., all of Tulsa.

Connally Act Limit

WASHINGTON, D. C.—The senate approved bill to make the Conally "hot oil" act permanent is facing stiffer opposition in the house subcommittee which may approve the extension only if limited to two years.

THE MARKETS*

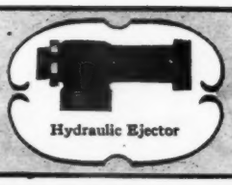
CRUDE OIL: *Prices generally firm. Purchases under posted schedules confined to isolated fields without major pipe line connections. Active solicitation for new connections in East Texas with arrangements which amount to premium paying reported.*

REFINERY: *Cold and rainy weather retarding gasoline consumption in some areas and refinery shipments were not as heavy as expected. While gasoline market is tight in several refining centers there were few changes by sellers in tank-car quotations. Kerosene more freely offered. Heavy oils firm.*

TANK-WAGON AND SERVICE STATION: *Standard of Ohio on May 5 rescinded action of April 29 in advancing gasoline tank-wagon and service station prices one-half cent. Failure of competing companies to meet advance said to be the explanation. No general changes in other marketing territories.*

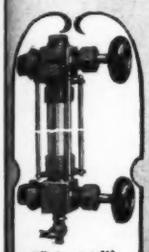
FINANCIAL: *Favorable first-quarter statements tending to keep declines in oil stocks less than average of other industries. Average of 30 representative oil stocks for weeks ending May 1: High, 42.4; low, 39.46; close, 41.77. Week ending April 24: High, 44.47; low, 42.01; close, 42.26.*

**Details in market section.*


Hydraulic Ejector

PENBERTHY PRODUCTS

Steam Ejector

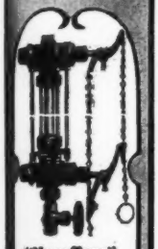

"Safeguard" Automatic Liquid Level Gage

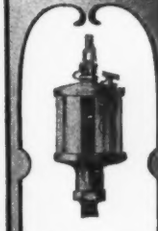
Automatic Injector

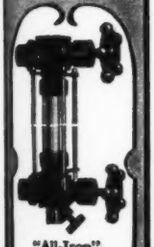
PENBERTHY REFLEX GAGE

(LICENSED UNDER JERGUSON PATENT)

for Oil Field, Locomotive Type, and Marine Boilers


"Navy Type" Liquid Level Gage


Gas Engine Lubricator

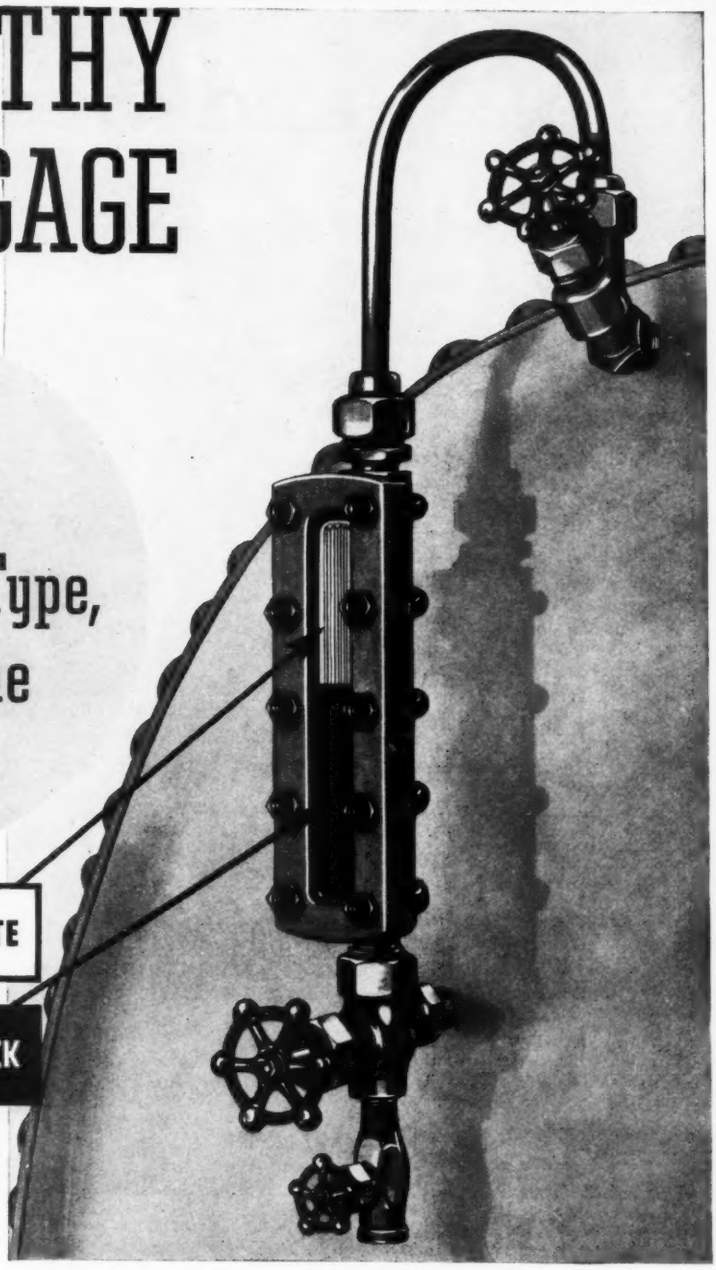

"All-Iron" Automatic Liquid Level Gage

Snap Lever Oiler

THE STEAM SHOWS WHITE

THE WATER SHOWS BLACK

PENBERTHY PRODUCTS



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• The Penberthy Reflex Gage shown here is recommended for working pressures to 350 lb. at 450°F. It is available in both Navy Bronze and Malleable Iron. Other Penberthy Reflex Gages are made in any length desired for higher pressures and for various kinds of liquids. Any leading oil well supply distributor will be pleased to quote upon your particular requirements.

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Pennsylvania State College Oil and Gas Conference

By J. P. O'DONNELL

STATE COLLEGE, Pa., May 1.—A record attendance of approximately 150 oil and gas men marked the seventh annual two-day petroleum and natural gas conference held at Pennsylvania State College under the auspices of the School of Mineral Industries.

Judged on the basis of subsequent discussion, the papers of most interest were those presented by Harry M. Ryder of the Ryder-Scott Co., Bradford, on shooting with special reference to secondary recovery (published in this issue of The Oil and Gas Journal), and by C. W. Georgi of the Enterprise Oil Co., Buffalo, N. Y., on lubricants for automotive hypoid gears.

In his discussion Mr. Georgi summarized the properties required as: Adequate load carrying capacity; good stability, both in storage and in service; total absence of abrasive action; chemical activity not corrosive to metals used in bearing construction; fluidity under all service conditions and low foaming tendencies. "The controversies which exist at the present time are not whether these properties are essential but revert to the question: How are they to be measured and how are we to determine accurately with respect to service if a given lubricant does or does not possess them?" he said.

Conclusions

Some of his conclusions follow:

1. Indications are that lead soap additions effect no increase in load-carrying capacity and that lead soaps alone or with mild E.P. agents in oil do not function to increase this capacity.

2. It would appear that many of the hypoid equipped cars now being built have overly large gears considering the engine power and car weight. It is possible therefore that future designs will show a reduction in gear size-engine power ratio with an attendant increase in gear loadings. The problem of the lubricant manufacturer will be to improve the load-carrying properties of E.P. lubricants rather than to debate the possibility of getting by on less.

3. It would appear that unstable lead soaps may be a greater factor in oxidation than oils.

4. A survey of current hypoid rear axle design shows that bulk lubricant temperatures during normal operation are well below 200° F. Under severe conditions these temperatures average approximately 100° to 120° F. higher than atmospheric temperatures. As long as axle lubricant temperatures are maintained in the present range, no difficulty should be encountered with service loss of E.P. value in the properly formulated lubricants.

5. Inclusion of dirt and gritty matter during manufacture of E.P. lubricants are unavoidable and may reach astonishingly high concentrations. Commercial sulfur contains appreciable quantities of abrasive impurities. E.P. bases most frequently contain foreign matter and commercial lead soaps may contain unreacted lead and other gritty matter. It is believed a large portion of the instances of wear were directly due to presence of dirt in E.P. lubricants.

6. There is considerable evidence to confirm the belief that the two major potential causes of hypoid gear and bearing wear are lack of sufficient load-carrying capacity and gritty impurities.

7. As active sulfur lubricants attack copper, the supposition that they will attack brass or bronze thrust washers is not fact. Some brass or bronze alloys are unaffected by sulfur while others may be blackened, a surface discoloration which does not progress further.

Electrical Well Logging

Electrical well logging in the Appalachian fields provides measurements of two things, resistivity and spontaneous polarization effect (s.p. effect), W. J. Gillingham, Schlumberger Well Surveying Corp., Houston, Tex., said in describing its application in the Pennsylvania region.

In speaking on "Pipe Corrosion, Electrolysis and Cathodic Protection," A. L. Black of Ford, Bacon & Davis, Inc., New York, envisioned considerable further improvement in cathodic protection, viewing the time when it will be supplied with a coating on new lines to make reconditioning a thing of the past.

Despite the fact the Appalachian region offers subsurface conditions much different from those encountered in Mid-Continent fields where it has been successful, reflection seismography has been applied successfully in this region, L. E. Randall, Geophysical Co., Inc., Charleston, W. Va., said. He mentioned that approximately 3,500 square miles, roughly half the producing area, in West Virginia, has been explored seismographically.

Brief talks were made at the dinner Friday evening by Christy Payne, Jr., assistant to the vice president of the Peoples Natural Gas Co., Pittsburgh; E. E. Bown, refinery manager, Kendall Refining Co., Bradford, and Mark C. Malamphy, consultant, Cumberland, Md. Dr. A. W. Gauger of the School of Mineral Industries, was toastmaster.

SAFETY WILL BE FEATURED AT HOUSTON OIL SHOW

Following a meeting of the Safety and First Aid Committee of the Oil-World Exposition composed of J. J. Delahide, E. D. Bullard Co., chairman, and Ed Lenzner, assistant chairman, and a committee composed of George J. Gruber, Mine Safety Appliances Co.; R. B. Roaper, Humble Oil & Refining Co.; Claude Liles, Magnolia Petroleum Co.; P. E. Keegan, Shell Petroleum Corp.; Tom Brown, Gulf Production Co.; Jerry Lockwood, Empire Oil & Refining Co., Bartlesville; Cecil Hightower, United Gas Public Service Co., and C. A. Miller, Texas Co., an outline of the program for Safety and First Aid has been agreed upon. A buffet luncheon will be given during exposition week on Wednesday, October 13 at 12 noon, and a talk on safety with demonstrations of personal protective equipment under the supervision of Cecil Hightower of the United Gas Public Service Co. as chairman.

The Oil-World Exposition championship First Aid contest will be held on October 13 at 7 p.m. P. E. Keegan, Shell Petroleum Corp., and T. H. Felds, Harris County Emergency Corps, will be in charge. George J. Gruber, Mine Safety Appliances Co., will be chairman of the entertainment committee.

A special safety committee with Charles A. Miller, Texas Co., as chairman has been appointed to supervise and check all exhibits.

A special fire prevention committee with R. B. Roaper, Humble Oil & Refining Co., as chairman will be in charge of the selection of fire fighting equipment throughout exposition.

G. O. Lockwood, manager, Empire Oil & Refining Co., has been appointed chairman of the prizes and trophies committee; Claude Liles, Magnolia Petroleum Co., Beaumont, Tex., chairman of the publicity committee, and T. F. Brown, Gulf Casualty Co., Houston, chairman of the First Aid contest and space.

The industry will be asked to make Wednesday, October 13, "Safety Day." A general invitation will be sent to field superintendents, foremen and officials.

Elimination contests are now being held by the leading oil company first aid teams; and the winners will be entered in the contest at the exposition.

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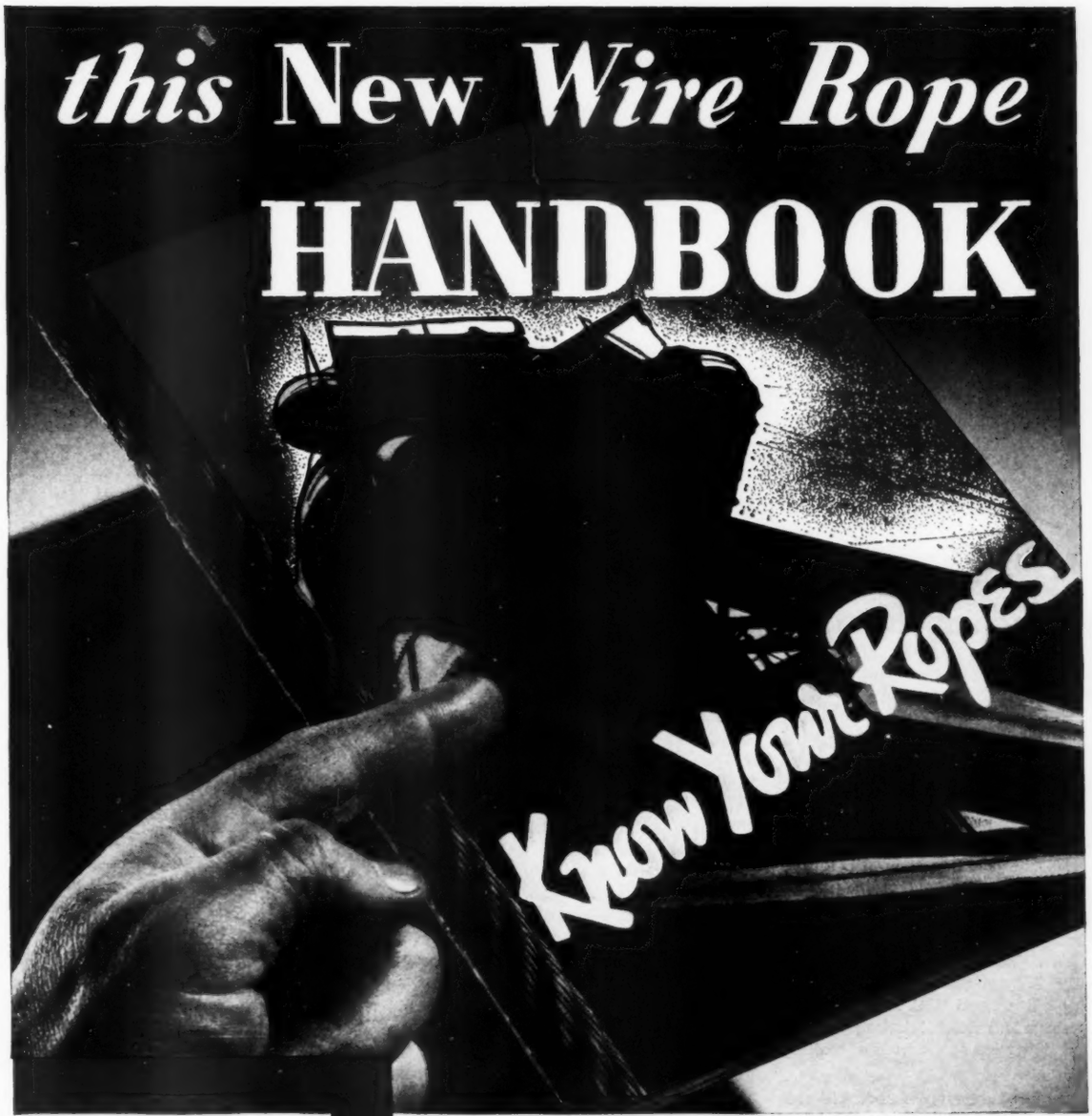

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Natural Gas News

New York-Pennsylvania Gas Fields

COUDERSPORT, Pa., May 3.—One new location was reported in the New York-Pennsylvania deep sand gas fields. New York State Natural Gas Co. is digging cellar on the Leland Schofield farm, Harrison Township, Potter County, 480 feet from the north and 447 feet from the west farm lines.

Potter Development Co. has three operations under way in Potter County, Pennsylvania. It is fishing at 5,145 feet on the Crawford Estate property, Keating Township; drilling at 285 feet on the May C. Haupt farm, West Branch Township, and is building rig on the Ida Scoville farm. Harrison Township. Kent Kane and others have rig on Government Surface Lot 515, Watson Township, Warren County. Updegraff is still shut down on the C. E. Erickson farm, Elk Township.

Potter Development Co. has a fishing job on the H. C. Kemp farm, Farmington Township, Tioga County. In this county, G. L. Cabot, Inc., is drilling at 2,880 feet on the Union Joint Stock Land Bank property, Brookfield Township and New York State Natural Gas Co. is drilling at 520 feet on the L. J. Roberts farm, Clymer Township. Potter Development Co. is drilling at 4,128 feet on the J. Chapin farm, Rockdale Township, and at 1,050 feet on the N. D. Dahl farm, Hayfield Township, Crawford County. The first topped Red Medina at 4,118 feet. McKenry and others remain shut down on the Stellman farm, Rockland Township, Venango County.

Kaufman and others are drilling at 3,850 feet on the Bank Angelica farm, Allen Township, and Empire Gas & Fuel Co. is shut down at 4,649 feet on the K. Mulvey farm, Alma Township, Allegany County, New York.

Cunningham Natural Gas Co. is shut down at 3,650 feet on the H. Hotchkiss farm, Randolph Township, Cattaraugus County, and Belmont Quadrangle Drilling Co. is drilling at 2,610 feet on the A. G. Hoffler farm, Leon Township.

In Steuben County, Atwater and others are drilling at 3,320 feet on the Herrington farm, Woodhull Township; G. L. Cabot, Inc., at 4,095 feet on the T. H. Wing farm, Greenwood Township, and Sylvania Corp. at 4,150 feet on the William Hendrickson farm, Troupsburg Township. Belmont Quadrangle Drilling Co. is moving on the Clara Lynch farm, Hartville Township.

Philadelphia Gas Plant

PHILADELPHIA, Pa.—The city of Philadelphia is inviting proposals for operation of the city-owned gas works for supplying gas for municipal, industrial and domestic use within the city. Proposals will be entertained for 2, 5 and 10 years, beginning January 1, 1938, and all proposals must be in the hands of the mayor by June 1, 1937. The city-owned plant is now operated by the United Gas Improvement Co. under a 10-year lease which expires December 31, 1937.

Domestic Gas Officers

TORONTO, Ontario.—Shareholders of Domestic Natural Gas, Ltd., elected the following officers: President, W. E. Stanley; directors, W. D. Bayne, J. H. R. Elliott, R. D. McCrie, Dr. W. Geiger; secretary-treasurer, T. E. Black.

TOLEDO, Ohio. — Northwestern Ohio Natural Gas Co. plans to discontinue natural gas service within Toledo August 2, its officials have notified city authorities. Approximately 60,000 Toledo homes are now served by natural gas. The decision to discontinue service is the outgrowth of a drawn-out dispute over rates. Company officials said its customers would have to find other fuel supplies for heating and cooking after August 2.

Natural Gas Department Program for Annual Meeting at Kansas City, May 10 to 14

The program for the annual convention of the Natural Gas Department of the American Gas Association, to be held at the municipal auditorium, Kansas City, Mo., May 10 to 14, has been completed. The first general session will be opened Monday by George E. Welker, United Natural Gas Co., Oil City, Pa., chairman of the department, followed by addresses by Herman Russell, president of the American Gas Association, and Alexander Forward, managing director. Dr. John W. Finch, director of the Bureau of Mines, will speak on "Economic Trends in the Consumption of Natural Gas."

Tuesday morning will be devoted to reports of committees, by H. C. Cooper chairman, technical and research; T. R. Weymouth, gas measurement; H. D. Hancock, pipe lines, and N. C. McGowen, gas well deliveries. George M. Parker, Mississippi River Fuel Corp., will review present methods of making manufactured gases.

Wednesday morning Chairman Welker will present the report of the supply men's fund committee. J. T. Russell, Panhandle Eastern Pipe Line Co., will read a paper on "The Use of Anhydrous Ammonia to Inhibit Gas Hydrate Formation"; W. M. Deaton, Bureau of Mines, Amarillo, Tex., on "Hydrates"; T. J. Strickler, Kansas City Gas Co., on "Advertising"; Prof. C. M. Young, University of Kansas, on natural gas extension courses.

Wednesday afternoon C. E. Reistle, Jr., Humble Oil & Refining Co., will speak on "Drilling Equipment Improvements and Changes"; S. W. Meals, Carnegie Natural Gas Co., Pittsburgh, Pa., on "Increasing the Flow From Small Producing Wells"; L. A. Farmer, Oklahoma Natural Gas Co., Tulsa, on "Prolongation of the Life of Gas Wells"; discussion to be led by L. G. Rheinberger, Sinclair Prairie Oil Co., Tulsa.

Air-conditioning will be discussed by L. A. Bickel, Dallas Gas Co.; Carl Dean, Oklahoma Natural Gas Co., and E. H. Lewis, St. Louis County Gas Co. at the utilization and sales promotion sessions Wednesday afternoon which will be continued Thursday afternoon.

At the general session Thursday morning John H. Schalek, Peoples Natural Gas Co., Pittsburgh, Pa., will present the report of the wrinkle committee. J. C. Reinbold, Panhandle Eastern Pipe Line Co., will read a paper on "Maintaining High Efficiencies in Pipe Lines," with discussion by J. L. Foster, Lone Star Gas Co., Dallas, and J. W. Ferguson, Colorado Interstate Gas Co. E. L. Rawlins, United Gas Public Service Co., Houston, Tex., will read a paper on "Gas-Reserve Problems Dealing With Availability of Natural Gas from Gas Reservoirs and Conservation of Gas in Its Occurrence With Oil." Discussion will be opened by J. H. Dunn, Lone Star Gas Co., Dallas.

A symposium sponsored by the natural gas transmission committee will be held Thursday afternoon dealing with recent developments in gas compression machinery.

GEORGE E. WELKER

Natural Gasoline

To Process Moore County Gas

AMARILLO, Tex.—A deal whereby Shamrock Oil & Gas Co. will process gas from properties of the Shell Petroleum Co. and Sinclair Prairie Oil Co. in Moore County, Texas, has been closed and will eliminate the construction of a natural gasoline plant previously planned by the latter two companies. Gas from Sinclair and Shell properties is to be processed in Shamrock's McKee plant, thus doing away with the necessity for a new plant. A carbon black plant, which the Columbian Carbon Co. was to have built to handle the residue gas from the proposed gasoline plant also will not be built. However, the company will enlarge the plant which has been processing the residue from the McKee plant and when completed the carbon black plant will have a daily burning capacity of 95,000,000 feet of natural gas.

Union Increasing Capacities

LOS ANGELES, Calif.—Union Oil Co. of California has almost completed an expansion program in the Dominguez field involving an increase of 25 per cent in the capacity of its natural gasoline facilities. The company plans to begin enlarging its compressor plant in the Kettleman North Dome field, and is also reconditioning its Orcutt plant in the Santa Maria Valley field. A 6-inch wet-gas line will be laid from a compressor plant on the Battles tank farm in the Santa Maria Valley field to deliver the gas to the plant. The resulting wet gas will be delivered to Southern California Gas Co.

Building Wilmington Plant

LOS ANGELES, Calif. — General Petroleum Corp. of California has started construction of a new natural gasoline plant in the Wilmington field that will be capable of handling 15,000,000

feet of gas per day. The plant will be located near the Ford Motor Co. plant on a 5-acre lease obtained from the Union Pacific Railroad Co. and should be completed by June 15. Wells in this field produce approximately 300,000 feet of gas per day along with the oil.

Texas Completes New Plant

LOS ANGELES, Calif.—Texas Co. has just completed construction of a new natural gasoline plant in the Shiells Canyon district of Ventura County, California. The plant is capable of processing 8,000,000 feet of gas per day and replaces a small plant that has been in operation for the past 20 years.

Plan La Blanca Plant

HOUSTON, Tex.—Negotiations are under way between producers in the La Blanca field of Hidalgo County, Texas, and the Refugio Refining Co. for the contracting of gas for a proposed new natural gasoline plant to be built in the field. According to reports, the plant will be designed to care for future expansion, attending the expected development of the new field, located in the heart of the citrus belt in the Lower Rio Grande Valley.

Pipe Line Work

Conroe Booster Station

DALLAS, Tex.—Contract for a $100,000 booster station on the Conroe pipe line of the American Liberty Pipe Line Co. has been let to National Supply Co., Secretary D. R. Zachry announced. The station, he said, is expected to increase by 10,000 bbls. the line's capacity of 30,000 bbls. daily. It will be built about 3 miles west of Humble and half way between the Conroe pump station and the company's terminals at Norsworthy on the Ship Channel. Preliminary work has started and erection of the station itself will begin the last of May.

Lisbon Gathering System

SHREVEPORT, La.—Gulf Refining Co. is laying a gathering system through the Lisbon field of Claiborne Parish, Louisiana, which will feed to the recently constructed 11-mile 6-inch extension from its El Dorado-Port Arthur line.

O.N.G. Co. Line

Contract for 20 miles of 10-inch and 18 miles of 8-inch gas line has been awarded to White Deer Pipe Line Construction Co. by Oklahoma Natural Gas Co. The line, oxyacetylene welded by the lindeweld method, will run from Crescent to Enid, Okla. Construction is to start at once.

Keystone Parallel Line

NEW YORK, May 3.—Keystone Pipe Line Co.'s 60 miles of 12-inch gasoline line from Philadelphia to Montello, near Reading, Pa., probably will be available for traffic in the middle of June. Construction is now entering its third week. The new 12-inch line parallels the company's 8-inch line from Philadelphia to Montello which has been in operation for some time. Between Philadelphia and Montello, Keystone operates arteries serving Fullerton and Allentown. At Montello, the system branches with one artery running north to Kingston and another branch running southwest and west to Harrisburg and Pittsburgh. Another branch runs north to Williamsport.

Refinery Expansion

Cracking Unit Completed

MUSKEGON, Mich.—Leonard Refineries, Inc., of Alma, Mich., has completed installation of a new Dubbs cracking unit with a rated capacity of 1,100 bbls. Potential throughput of the plant thereby was increased to about 3,500 or 4,000 bbls. Installation of an Ethyl unit under license from the Ethyl Gasoline Corp. also has been started.

Contracts for New Tanker

PHILADELPHIA, Pa.—Atlantic Refining Co. has awarded to Sun Shipbuilding & Dry Dock Co., Chester, Pa., a contract for construction of a second all-welded 18,500-ton tanker, to be completed for delivery in September, 1938. The all-welded tanker of the same tonnage now being built for Atlantic in the Sun shipyards is scheduled for delivery before the end of this year. The two Atlantic tankers are the world's largest welded ships now under contract.

The tanker for which the contract has just been awarded will have a cargo capacity of 156,000 bbls. of gasoline, and will be equipped with pumps which will enable it to discharge its cargo at the rate of 15,000 bbls. an hour. The vessel will be 521 feet long between perpendiculars, and will have a beam of 70 feet. Turbo-electric engines developing 5,000 horsepower will give it a speed of over 13 knots, enabling it to make the trip between Philadelphia and Texas Gulf ports in the unusually fast time of six days.

Jenkins Awarded Verdict

PORTLAND, Me.—After some 16 years of litigation Jenkins Petroleum Process Co. of Milwaukee, Wis., has been awarded a $2,000,000 verdict in its $5,000,000 breach of contract suit against Sinclair Refining Co., Inc., of Maine. A federal court jury returned the verdict after the suit had been in process of trial at Portland for the past month. A cracking process originated by the late Ulysses S. Jenkins in 1917 was the basis of the suit, the Jenkins company contending that it entered into a contract with the Cudahy company, now Sinclair, whereby the plaintiff should be given the benefit of any discoveries resulting from improvement of the Jenkins process. Sinclair engineers conducted a successful experiment based on the Jenkins process and the dispute was whether results of the experiments belonged to the Jenkins company or to the Sinclair company.

Pipe strung along ditch for Longview line

Skelly to Build Treating Plant

Skelly Oil Co., Tulsa, has announced that it will install a 14,400-bbl. copper sweetening plant for treating refined oils produced in its Eldorado, Kans., refinery. Construction of the plant will begin as soon as possible, plans calling for the plant to be in operation within six months. Several units of the new treating plant are now being designed and when the plant is completed it will be the largest outside installation of the process. Owner of the copper sweetening process is the Petroleum Engineering Research Co. of Bartlesville, Okla.

Huff Increases Storage

LETHBRIDGE, Alberta.—Huff Refining Co., Ltd., has increased the storage capacity of its Lethbridge plant by 20,000 gallons, and its storage at the border by 1,000 bbls. This provides the company 650,000 gallons of storage at Lethbridge and 2,000 bbls. at the border tank farm which is linked with the Toronto Pipe Line Co. Montana line.

Meraux Takes Over Gulf Terminal

HOUSTON, Tex.—Meraux Terminal Co., recently organized by eastern capital and headed by Harvey Carter of New York City, has taken over the old Sinclair Refining Co. plant at Meraux, La. The company will purchase crude from various South Louisiana fields and store it until sold to refinery companies not having production of their own. The company will also import and export crude oils.

Scouts Prepare Program

FORT WORTH, Tex.—The entertainment committee making plans for the National Oil Scouts Convention at the Baker Hotel in Dallas on June 25 and 26 met in that city and drew up a tentative program.

Following technical papers there will be talks by several speakers, including W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, New York, if he can so arrange his schedule. Friday afternoon a golf tournament will be held, followed by a stag party that evening. Saturday morning other papers will be presented and the business session will be held, the afternoon being devoted to election of officers. A dinner dance will conclude the meeting.

Howard Boyd, secretary-treasurer, and John H. Langston, chief scout for Sun Oil Co. and past president of the association, head the entertainment committee.

Purchasing Agents Convention

PITTSBURGH, Pa.—Industrial leaders will lead discussion on 14 commodities, including petroleum, at the twenty-second international convention of the National Association of Purchasing Agents here May 24-27. Among the papers will be: "Coke and Other By-Products of Coal," by C. J. Ramsburg, vice president, Koppers Co., Pittsburgh, and "Petroleum and Its Products," by Dr. Paul D. Foote, executive vice president, Gulf Research & Development Corp., Pittsburgh.

New Mellon Institute Building

Modern Temple of Science

PITTSBURGH, Pa.—The new building of the Mellon Institute of Industrial Research, which has required six years to complete, will be dedicated this week, with exercises beginning May 5 and continuing through May 9.

Classic in exterior the interior of the building is strictly utilitarian in the grouping of research laboratories. Back of the 62 monolithic columns surrounding the edifice are facilities designed to be both useful and convenient. Beauty and utility mingle in all parts of the building, particularly in the library, in the social room and in the auditorium. Automatic elevators, with aluminum doors opened and closed by photoelectric cells, will carry the research workers from top to bottom of the broad nine-story limestone and granite temple of science.

Although founded primarily as a center of applied science for industrial research—65 applied science researches being carried on at present—the Mellon Institute has devoted a limited amount of effort to pure science. In the new building, with more space and improved facilities, the plan is to broaden the research in pure science, particularly in chemistry, physics and biology.

The late Richard B. Mellon and his brother, Andrew W. Mellon, former secretary of the treasury, founded the institute in honor of their father, Judge Thomas Mellon of the 1837 class of the University of Pittsburgh. The new building is their gift, as was the previous building, opened in 1915. They obtained the idea for the institute from the work at the University of Kansas of the late Dr. Robert Kennedy Duncan, whom they chose as its founding director.

Dedication Ceremonies

Dr. Edward R. Weidlein, the present director, will preside at the dedication exercises on the afternoon of May 6, when short talks will be delivered by Andrew W. Mellon and Richard K. Mellon, representing the founders. There will be addresses by three Nobel laureates, Dr. Irving Langmuir (chemistry), Dr. H. C. Urey (chemical physics) and Dr. W. P. Murphy (medicine). The trustees' dinner will be held that evening, and among the speakers will be Dr. Benjamin T. Brooks, chemist of New York; Dr. Karl T. Compton, physicist of Cambridge, Mass., and Dr. F. C. Whitmore, organic chemist of State College, Pa.

Director Weidlein was born at Augusta, Kans., in 1887. After graduation from the University of Kansas he was appointed an industrial fellow and conducted from December 1, 1909, to March 1, 1910, at the University of Kansas a study of camphor under the direction of Dr. Robert Kennedy Duncan, founder of the industrial fellowship system in America. Doctor Weidlein carried out various researches in the following years, and after the transfer of the industrial fellowship system from Kansas to the University of Pittsburgh he joined Doctor Duncan in Pittsburgh. He became assistant director in 1916 and director of the institute October 8, 1921. For outstanding work in which the institute figured he was awarded the Chemical Industry Medal in 1935 and in 1936 was elected president of the American Chemical Society.

The Mellon Institute was established in 1913 as a department of the University of Pittsburgh to promote cooperation between science and industry. The industrial research, Doctor Weidlein explains, is organized on a contract basis. A problem is suggested by a factory, an association or an individual,

DR. E. R. WEIDLEIN

who furnishes the necessary funds. A qualified scientific worker is engaged by the institute under an industrial fellowship covering a period of at least one year. Each holder (fellow) of an industrial fellowship is given for the time being the broadest facilities for accomplishing a definite piece of research, and all results obtained belong exclusively to the donor of the fellowship. By the industrial fellowship system, the institute has demonstrated to some 4,000 American companies, either as individuals or as members of industrial associations, that research properly conducted is profitable. More than $10,000,000 has been received by the institute from industrial fellowship donors to defray the cost of scientific investigations conducted for those companies and associations.

Petroleum Fellowship

During the past year the petroleum fellowship completed a quarter-century of continuous operation. The work began in September, 1911, under the direction of R. F. Bacon (director of the institute, 1914-21), continued under B. T. Brooks until 1917, then under W. F. Faragher (assistant director, 1923-26), and since 1923 under W. A. Gruse. Over this period 65 scientifically trained investigators, mostly chemists, were engaged in studying the chemistry and technology of petroleum, chiefly from the point of view of refining and utilization. Between 1924 and 1928 a separate fellowship devoted to production of petroleum, under P. D. Foote, was maintained; this group was subsequently converted into an independent research organization. Similarly, between 1920 and 1922, an associated fellowship on American oil shale was in operation.

Wide Range of Problems

The work of the fellowship has covered a wide range of problems, including nearly all types of petroleum products and nearly all the ways in which petroleum is used. One of the first subjects of investigation was the conversion of heavy oils into gasoline by cracking, and patent applications were filed as early as 1912. From the same period dates the pioneer work of Messrs. Brooks and Bacon on the fluorescent compounds in petroleum. Later Mr. Brooks published a fundamental contribution to the chemistry of sulfuric acid refining, particularly of cracked products. Other topics investigated include: Wax manufacture, asphalts, composition of cracked gasoline, chemical nature of oxidizable and gum-forming hydrocarbons in cracked gasoline, nature of sulfur compounds in gasoline and heavier oils, action of aluminum chloride on petroleum oils, chemistry of olefinic gases as related to gasoline, chemical stabilizing of motor fuels, constitution of high-boiling oils, and a range of problems on deposits in internal combustion engines, including those from both fuels and lubricating oil; the work on "carbon" deposits, which started in 1925, established for the first time reproducible methods for studying carbons, and correlated the kinds and amounts of deposits with the various types of lubricating oils. Investigation of the chemistry of cracked gasolines has yielded much highly valuable information, which has been influential in developing successful practical methods for protecting these gasolines against deterioration during storage and use.

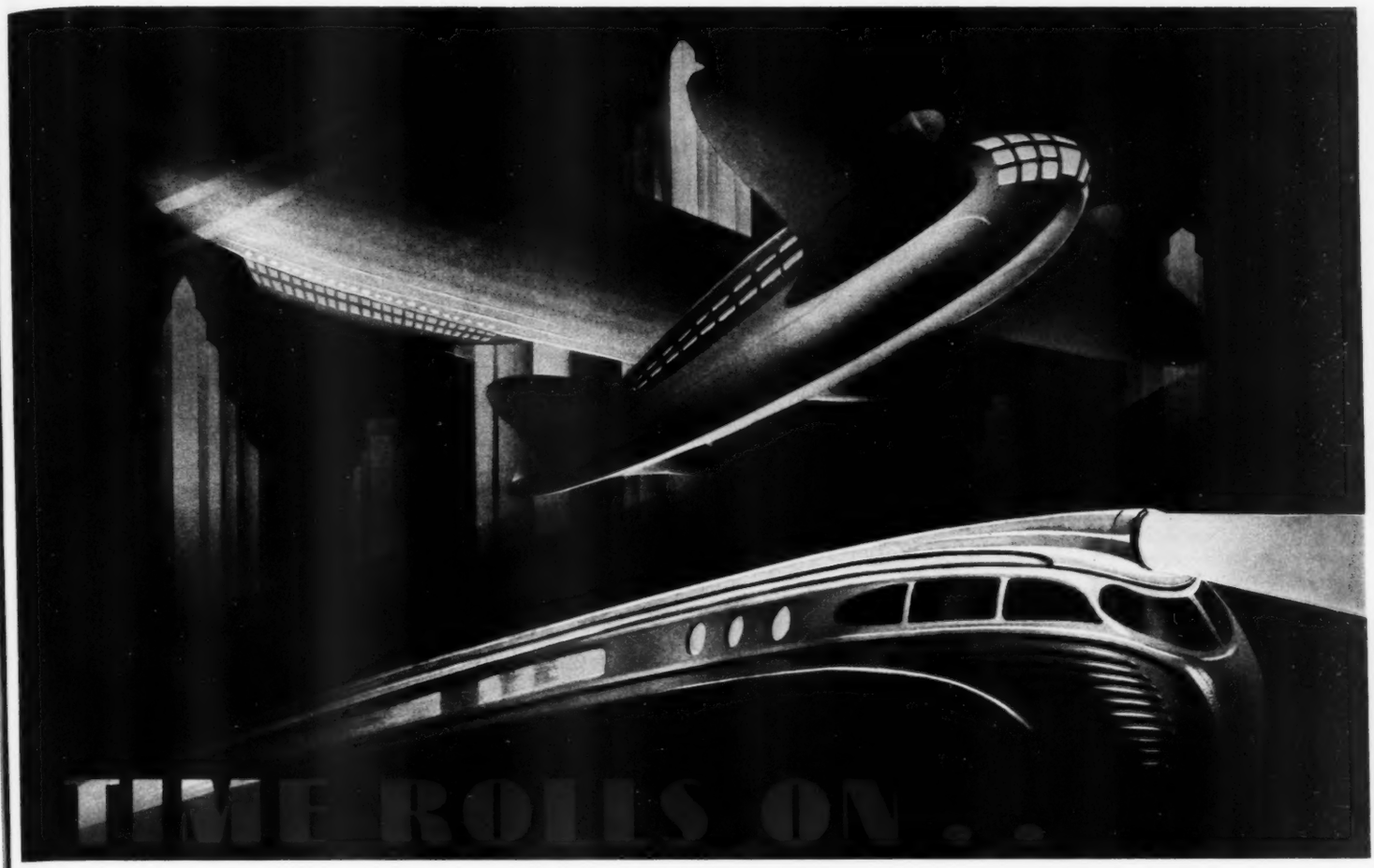
During the period covered by this fellowship, its members have published 60 journal articles on scientific subjects and have taken out 54 United States and 26 foreign patents.

Magnetic Storms

TUCSON, Ariz.—The U. S. Coast and Geodetic Survey report a severe magnetic storm between 6 a.m. (C.S.T.) April 24 and 7 p.m. (C.S.T.) April 28. Telegram follows:

"Severe storm began twenty-fourth. Six. Ended twenty-eight. Nineteen. Central Time."

A Washington dispatch of April 26 said: The sun is stirring up one of the most violent magnetic storms in history on the earth's surface. This storm, Dr. A. G. McNish of Carnegie Institute said in a report to the American Geophysical Union, is causing difficulties in radio, telephone and telegraph communication. It also is causing great changes in magnetic compasses.



Science advances . . . methods change . . . materials change . . . what was accepted a short time ago "as the best" is now obsolete . . . more and more is known about the problems that only a short time ago were thought insurmountable . . . and so it is with drilling muds . . .

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Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

Points the Way

Workers at the Baytown refinery, deprived of their agency for collective bargaining by the discontinuance of the joint conference method presumably taboo under the National Labor Relations Board rulings, have worked out a solution of their own.

After canvassing the situation a group of employes, acting wholly on their own initiative, set about the organization of a federation of employes for the express purpose of collective bargaining, called a meeting to adopt a constitution and by-laws and submitted the plan to a vote of the workers which is now being taken with every indication the action will be ratified by a large majority.

The employing company having withdrawn from the former joint conference in deference to the presumption that it would not be approved by the National Labor Relations Board kept strictly aloof from the new federation which represents and is responsible to the workers alone.

The Wagner act itself is simple, perhaps too much so in not being sufficiently specific. Its sole purpose is to protect workers in their right to organize for collective bargaining. It does not, as its author, Senator Wagner, has said, force any worker to join an outside union or any union.

Employes of any concern may organize or not, as they please; they may affiliate with an outside union or organize among themselves; the law does not interfere.

All that the law does is to protect them in their right to organize to bargain collectively whatever way they choose.

In the 18 months since the board has been in existence it has handed down 150 rulings, administrative interpretations of the none too specific provisions of the act itself. But on this one point there is no room for doubt or discussion; the right of employes to make their own choice of organization for collective bargaining is in the clear.

It is a very simple procedure which does not require any involved organization. The initiative must be taken by the employes themselves of their own volition. No complicated or expensive setup is necessary, either in paid officials or overhead, which can be limited to a mere fraction of the cost of membership in an outside union.

The plan has the decided advantage of permitting the workers to select representatives who are fellow employes, familiar with the problems of the workers and the management in that particular plant, rather than turning over the bargaining to an outsider who can have no personal knowledge of the situation.

At the same time direct election of worker representatives is an assurance there can be no coercion by management and that there will be full freedom for ventilation of difficulties that may arise.

All that is necessary, as the case at Baytown shows, is to have the facts straight. Baytown workers did not wish to join an outside union. Deprived of their former collective bargaining agency they simply formed a new one of their own, a right which the Wagner act will protect and which no law or ruling can take from them.

To assume otherwise is to imagine that a law of the United States could be used to compel workers to join any certain union or any union, a form of regimentation for which this country at least is not yet ready.

Important Exploratory Well Is Started Near Syracuse, Kas.

By DR. ED. BLOESCH
Consulting Geologist, Tulsa.

Out on the western edge of Kansas in Hamilton County there is a very large structural feature not far south of the county seat town of Syracuse. The first published accounts of geological observations in this western region are contained in the reports to the government of Dr. La Conte and Dr. J. S. Newberry covering a journey made in 1859 across the plains to join the San Juan expedition under Captain Macomb, topographical engineer. Their account of this trip was contained in a regional report by Captain Macomb in 1876. The feature observed in particular was exposures of Dakota sandstone and other rocks of Cretaceous age at comparatively high elevations.

In 1918 N. H. Darton, of the U.S.G.S., published a 100-page contour map on the Dakota of western Kansas, Nebraska and parts of adjoining states. The map was based on outcrops and water well information. On it a number of anticlinal axes are indicated, but inside of Kansas only one closure, the Syracuse dome, is shown. This dome is on a large eastward plunging anticline through southern Hamilton and Kearney counties. This major structural feature is cut off by a syncline a few miles west of the Colorado state line.

As the oil men moved westward in Kansas this major structural feature attracted the attention of the Wood Oil Co. and in 1924 that company drilled a test in the NW corner of section 5-26s-41w. Several showings of oil and gas were encountered, but no commercial pay was found and the hole was abandoned at 5,488 feet, at that time the deepest hole in Kansas or Oklahoma. This test well was so far away from any other well which reached the same formations a controversy arose as to the age of the lowest strata encountered. In the light of later information it is now considered probable the Wood test well stopped in the Chester formation of Upper Mississippian age.

The next movement was to the western boundary of Kansas and the Hugoton gas field was discovered. There are also several gas wells near New Ulysses and southeast of Lakin in southwestern Kansas. Early this year Viola lime production was opened in the eastern part of Clark County and Chester production was found near the town of Shallow Water in Scott County, Kansas, in 1935.

The next step in Kansas oil development will be a test of the extreme western part of the state. From the Darton map it will be seen the most favorable place to test the possibilities of this part of Kansas is on the Syracuse structure. With this idea in mind William J. Sherry, independent operator of Tulsa, assembled a large block of acreage covering the whole regional uplift on this structure. Mr. Sherry has contracted with Denver Producing & Refining Co. of Oklahoma City to start a well in the SW NE of section 30-25s-41w in Hamilton County and this well has spudded in and the contract calls for test to about 6,000 feet, the objective being the Simpson formation of Ordovician age, and it is probable the Arbuckle or Siliceous lime formation may also be tested with this well.

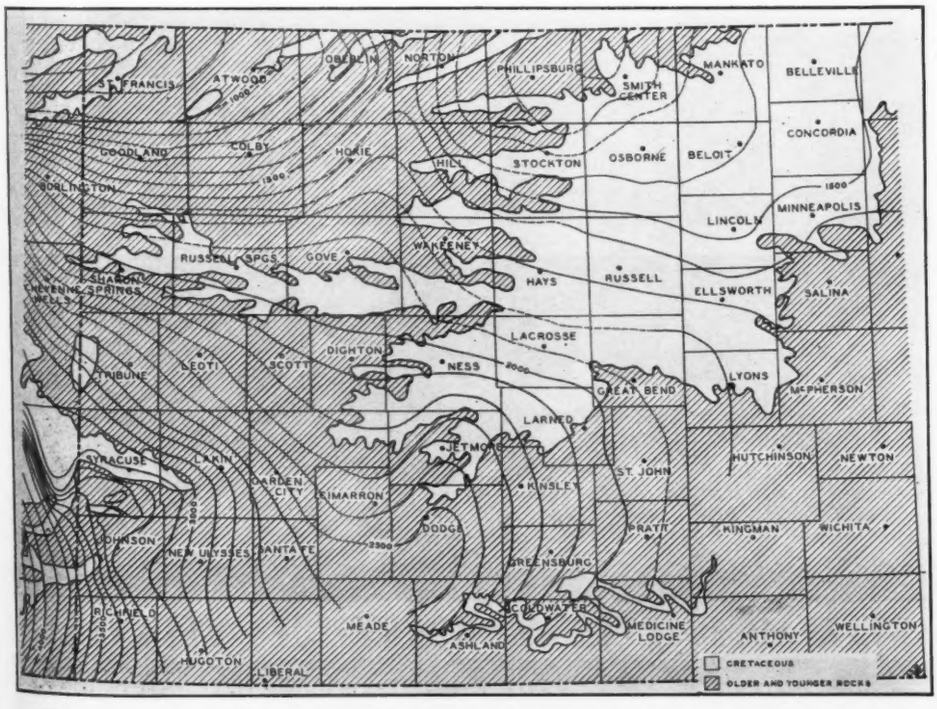
While the Cretaceous rocks on which the structure has been worked rest unconformably on the Carboniferous and older rocks, any folding which has affected the surface rocks must have taken place in the underlying formations. Experience in the Mid-Continent indicates older strata have been more strongly folded than those at or near the surface. A seismograph survey proved folding is present in the Paleozoic. Structure drilling was undertaken under the direction of the author.

From this information the following deductions have been made. Nosing on a large scale, coupled with a syncline in extreme eastern Colorado, prove an uplift of considerable magnitude which must affect the deeper formations. A number of domes are superimposed on this uplift. One of these domes was carefully worked out by the writer. The well location is on the apex of this dome, close to the highest known Dakota formation revealed in a well drilled in the center of the section. The structure drilling has proven conclusively that the old Wood Oil Co. test was located in a saddle between these domes. The present location is 70 feet higher on the Dakota than the test drilled in 1924.

While this test is too far from actual production or other deep tests to make definite predictions, the following horizons will be the objectives of the well. The shallow gas horizon of Hugoton may be found productive. Sands in the Pennsylvanian, which were scarce in the Wood test well may appear. Lime formations of the Pennsylvanian, especially the Kansas City-Lansing, may be encountered and be found productive. When the Wood Oil Co. test was drilled the Kansas City-Lansing limestones were not carefully tested and the well was also drilled before the use of acid for treating lime reservoir rocks.

Good production may be expected in the Chester, which had a show of oil in the old test and contains the nearest production 60 miles to the northeast. The part of the Mississippian containing the chat oil farther east is undoubtedly present, but may or may not be sufficiently porous for accumulation. The Hunton is very likely missing, at least at the top of such a large dome. Of the Ordovician formations, the Viola is producing in Clark County and this formation was not reached in the Wood test. Simpson may or may not be present in the area, and the Arbuckle or Siliceous lime is of course always the ultimate goal of deep drilling in case no production is found above. This horizon may be expected at around 6,000 feet, a depth not considered excessive any more in deep drilling.

Gulf Oil Corp. holds over 15,000 acres of leases on this structure. Barnsdall Oil Co., Denver Producing & Refining Co., Empire Gas & Fuel Co., and Shell Petroleum Corp. each have 4,000 acres. Magnolia Petroleum Co., National Refining Co. and others have acreage, which, with the leases held by Mr. Sherry, amount to over 85,000 acres on the structure in Townships 25 and 26s, Ranges 40, 41 and 42w.



Western Kansas showing structure of Dakota sandstone. Contour intervals—100 feet

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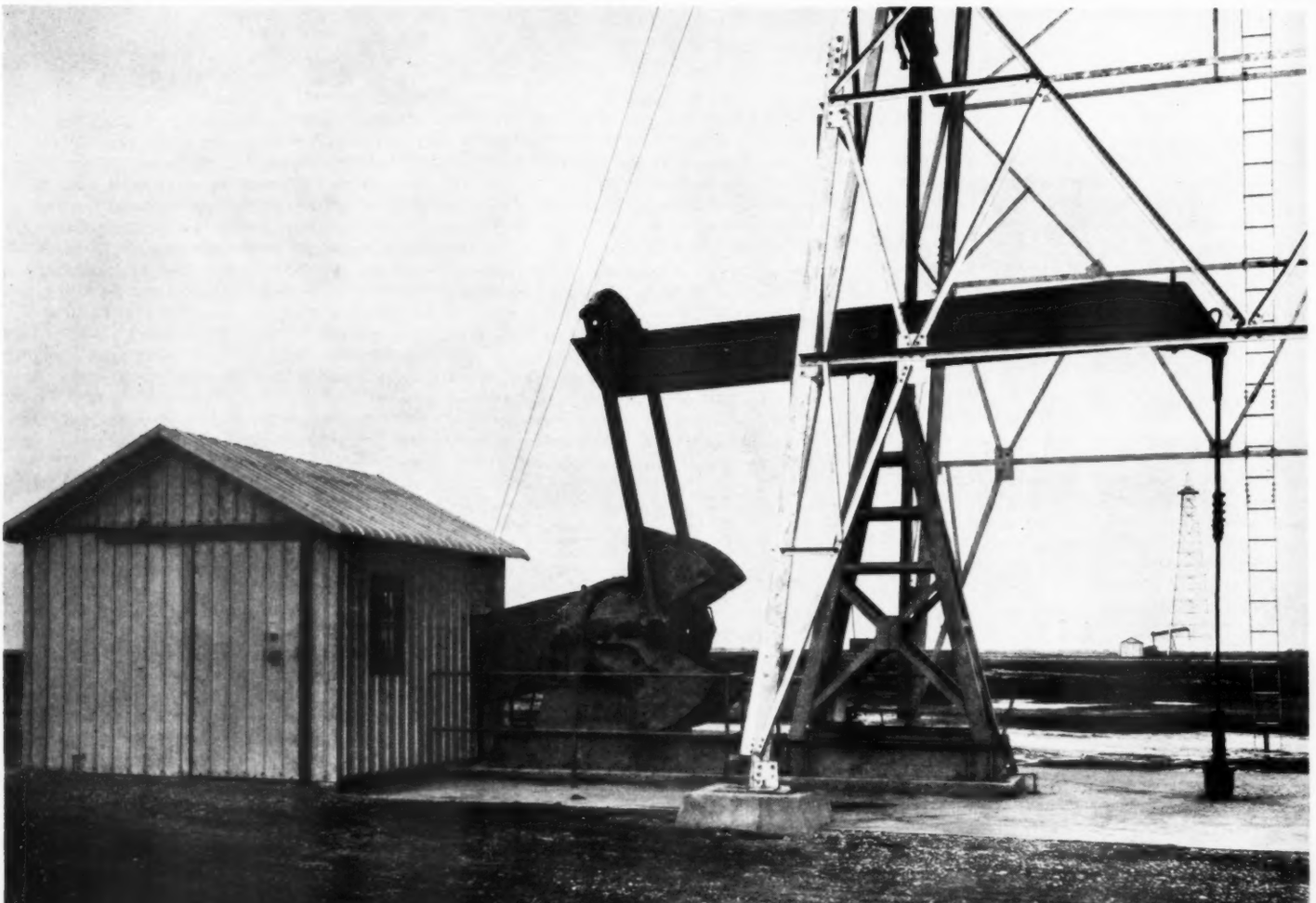

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Oil News from Foreign Lands

Mexican Labor Situation

Private companies and the oil field labor syndicates in Mexico are nearing a showdown on their dispute which has been subjected to joint conferences by designated representatives since last November. Conversations over a national petroleum law to cover all forms of oil field labor are not progressing satisfactorily, and friction has developed due to the workers' renewed insistence on immediate acceptance of demands for higher wages, generous overtime, vacations, allowances and other privileges.

Some observers report from Mexico the controversy is headed for a general strike, but others discount this, contending President Cardenas is opposed to disruption of so important an industry because it affords a large part of the government's revenues which the administration needs to execute the public works program, including railroad, highway and irrigation construction.

The truce jointly approved last November will expire the latter part of May.

Greece Plans State Monopoly

Plans of the Greek government to extend the state monopolies to include gasoline, kerosene and other petroleum fuels, announced in a dispatch from Athens last week, attracted considerable interest in American oil circles due to importance of United States trade with Greece in 1936.

The government control of kerosene prices in the southern half of Greece and its control in fact of the retail price of gasoline in all of Greece remained unchanged throughout 1936. A basis for computing costs and expenses of gasoline over and above which the companies are in theory allowed 5 per cent profit, was issued by the government in 1936, but the oil companies claim that the government's c.i.f. cost factor is out of line with the facts and that in selling gasoline at the present figure allowed by authorities, they are still either losing money or making no profit.

In reviewing 1936 petroleum operations in Greece, George Lewis Jones, acting commercial attache, points out that the United States supplanted Rumania as the chief supplier. A subsidiary of Socony-Vacuum Oil Co., Inc., is the only American company active.

"Rumania is geographically the logical source of petroleum for Greece," wrote Mr. Jones in his annual survey, "but in 1936, owing to the Rumanian premium system as well as satisfactory prices, the United States assumed the position of Greece's leading supplier of petroleum products. According to the Greek trade figures, Greece imported about $3,200,000 worth of petroleum products from the United States in 1936, compared with about $1,575,000 in 1935.

"On the basis of volume, Rumania and the United States almost exactly exchanged places between 1935 and 1936. In 1935 Rumania supplied approximately 73 per cent in volume of Greece's petroleum imports—in 1936 the United States supplied about 71 per cent of these imports. In total value Rumania, which supplied 56 per cent in 1935, supplied only 21 per cent in 1936; the United States, which supplied 37 per cent in total value in 1935, supplied about 75 per cent in 1936."

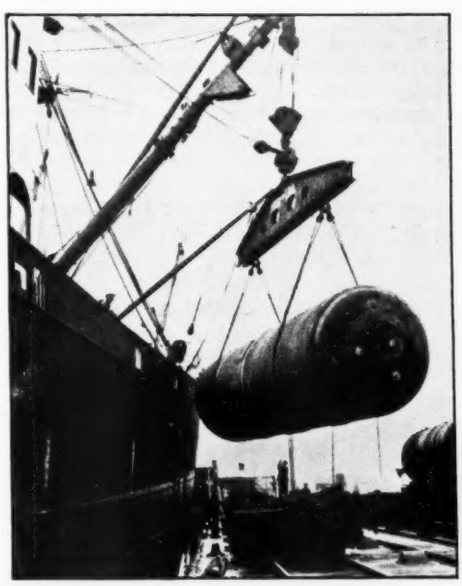
Greece's total imports of four major petroleum products increased 36,303 metric tons and 40,000,000 drachmas (about $360,000) in 1936. The market for gas oil and fuel oil is steadily growing in Greece, particularly for fuel oil due to the increased use of oil burners. The fuel oil business is principally in the hands of the Shell company, which has adequate storage facilities. The United States was the chief source of supply in 1936 furnishing 993,298 bbls., against 301,230 bbls. coming from Rumania. In 1935, the fuel oil imports were divided 877,784 bbls. to Rumania, 193,541 bbls. to the United States, 2,856 bbls. to Curacao and 184 bbls. to Netherlands Indies.

United States shipments of gasoline to Greece practically doubled in 1936 reaching a total of 370,006 bbls., compared to 193,105 bbls. in 1935. On the other hand, Rumanian shipments of gasoline to Greece declined from 259,131 bbls. in 1935 to 107,520 bbls. in 1936. Out of the total imports last year of 492,610 bbls., 15,084 bbls. came from "other countries."

Greece's imports of lubricating oils and greases are shown in the following table with figures in gallons:

Supplier—	1936	1935
United States	40,515	62,436
Rumania	4,073	12,630
United Kingdom	4,076	5,984
Germany	13,250	6,397
Belgium	2,280	2,517
Other countries	1,272	674
Total	65,466	90,638

The larger stocks of lubricating oil and greases on hand at the end of 1935 account in part for the decline of imports of these commodities in 1936. Lubricating oils and greases are in Group B of the Greek import control scheme and their importation is free from "clearing" countries. In the case of the United States lubricating oils are entirely free of all quota restrictions and foreign exchange is made freely available by the Bank of Greece to pay for shipments either by letter of credit or against sight draft. This accounts for the fact that there are about 25 individual importers of oils and greases aside from the established companies which import in drums or tins ready for retailing. An interesting feature of 1936 trade was the sudden increase in the importation of lubricants from Germany. It is said that most of these imports came from a processing subsidiary of the Shell company and that it has stopped exporting to Greece, and this business will not be important in 1937.



Equipment destined for 10,000-bbl. refinery of the Bahrein Petroleum Co. (Standard of California) in the Persian Gulf

Barco Deal Completed

Texas Corp. and Socony-Vacuum Oil Co., Inc., are now joint owners of 100 per cent interest in Colombian Petroleum Co., which in turn owns the Barco concession in eastern Colombia. Purchase of the outstanding minority interest for $2,050,000 from Carib Syndicate was completed last week. Total investment of Texas and Socony-Vacuum in the Barco concession now stands at $14,550,000, exclusive of operating expenses incurred on their jointly owned 79 per cent interest from the middle of 1936 to time of the purchase last week. The 79 per cent interest in Colombian Petroleum Co. was purchased in the first half of 1936 from South American Gulf Oil Co. for total consideration of $12,500,000, part of which is payable over a term. Sale of the 20,068 shares of Colombian Petroleum Co. stock held by Carib Syndicate was protested by a few minority interest holders, but objections were eliminated. If sufficient production is developed on the Barco concession, Colombian Petroleum Co. is obligated to construct a pipe line to a Colombia port. Operators of the concession are moving its equipment and headquarters to a new location in Colombia on the Rio Zulia in preparation for a more extensive wildcat drilling program. Several shallow wells have been completed at La Petrolea in the upper Cretaceous.

Exploration in Near East

Increased attention is being directed to producing and potentially productive lands in the Near East radiating in three directions from the Persian Gulf. Since the first of 1937, Bahrein Island has been producing at the daily average rate of 23,100 bbls., nearly double its 1936 average of 12,723 bbls. daily. For the first quarter of this year Bahrein has produced 2,078,000 bbls., indicating output for the year will run in excess of 8,500,000 bbls. Furthermore, the draft on reservoir storage probably will be increased during the last half of this year when additional refining facilities now nearing completion will be available. In eastern Saudi Arabia, California Arabian Standard Oil Co., subsidiary of Standard of California, is continuing with its exploration program to determine the full capabilities of Dammam dome already proved productive at three of the nine drilling operations.

Interest of American companies in Egyptian oil possibilities is reported to have been revived since enactment of a new petroleum prospecting law. Several applications for exploration permits are reported on file with the Egyptian government with final disposition awaiting issuance of regulations under the new law. The Egyptian government has attempted to make its law and regulations less stringent in an effort to attract its share of large sums expended by British and American companies in other parts of the Near East.

British Imports

Despite an increase of more than 22 per cent in fuel oil imported by England during the first quarter of 1937, and a smaller gain in gas oil receipts total business was only slightly improved over the same quarter in 1936.

Crude oil, gasoline, kerosene and lubricating oil imported by Great Britain through March of this year were less than registered in 1936.

Fuel oil imports increased to 4,018,762 bbls. for the first three months in 1937, compared to 3,278,857 bbls. for the same period last year. Gas oil imports this first quarter totaled 709,024 bbls., against 688,524 in 1936. Total imports of petroleum and products is reported by the Board of Trade at 16,282,357 bbls. for the first quarter of 1937, compared to 16,255,119 bbls. in 1936.

The following table shows the imports for the first quarter of 1937 and 1936.

	First quarter 1937	First quarter 1936
Crude oil	2,408,071	2,744,905
Gasoline	7,399,643	7,545,548
Kerosene	1,290,714	1,306,000
Lubricating oil	456,143	690,285
Gas oil	709,024	688,524
Fuel oil	4,018,762	3,279,857
Total	16,282,357	16,255,119

Boxes of various designs catch samples at wells where the shale shaker is not used

Rotary Drill Cuttings Guide in Exploration

One factor playing an important role in the discovery of new oil supplies is the microscopic examination of drill-cutting samples. Taking of samples has become a recognized part of drilling operations, their value having been demonstrated for determining casing points and logging well, and the intensive search for new fields has resulted in more attention being directed to the significance of the samples. In this, the first of a series of articles on cutting samples, the author gives a discussion of the practice as applied in the Mid-Continent.

By PAUL REED

With the growing tendency to focus more and more attention on the significance of rotary-drill cuttings as sources of information with a vital bearing on exploration and development operations, there have sprung up highly organized systematic procedures which may be regarded as a special technique within the industry. Since the work involved is carried on quietly, the importance as well as the scale of operation is likely to be obscured. Practices in the Mid-Continent connected with the collection, preparation, examination, correlation and storage of drill cuttings have a number of points which are unique as the result of conditions in this area. And since most wells are drilled with rotaries, samples are of primary consequence. Some of the methods involved are the product of fairly recent evolution, and there is reason to believe that effectiveness and economy may be promoted even further by future organization and standardization.

In the drilling of rotary wells today, so general is the practice of having casing points determined on the basis of data furnished by drill cuttings that it is easy to forget that no further back than the days of the development of Seminole was it possible to find some major companies entirely disregarding this kind of evidence. In the drilling of a high point on the structure at that time, it is cited, that even though geologists on the ground called attention to the fact that drill cuttings indicated that the top of the Viola limestone was high, nevertheless, casing was set at a point below the sand. The well had been located on a prolific spot but it failed to get production. However, it was Seminole experience that gave the first big impetus to the program of obtaining formation data from rotary-drill cuttings.

Before that time most subsurface work in connection with exploration was done with drillers' logs, which to a large extent came from cable-tool wells. With the great influx of rotaries into Oklahoma coming with the drilling of Seminole, necessary information was lacking owing to the inaccuracy of the rotary log. Thus there came a recognition of the importance of getting a log from a rotary well which would attempt to provide data with a reliability comparable to that of the cable-tool driller's log. For several years previously a few companies had been saving samples and making up sample logs from cable-tool and rotary cuttings, but the practice was far from general. In 1932, Robert M. Whiteside[1] of Shell Petroleum Corp. estimated that prior to 1927, samples of cuttings were consistently saved in the Mid-Continent on only a small percentage of rotary wells above the depth of changing to cable tools. Between the discovery of Oklahoma City and 1932, he estimated that 75 per cent of the rotary wells drilled were represented by samples from 1,000 feet to completion depth. Today, major oil companies estimate that cuttings are procured regularly for microscopic examination from more than 95 per cent of all rotary wells being drilled in Oklahoma. As a result of the systematic organization which has been developed for handling cuttings, samples from nearly all wells being drilled are available for examination by oil company staffs. A cooperative network for gathering samples extends throughout Oklahoma and into adjacent areas.

The growth of the practice of using drill cuttings as sources of information has come with the increasing influence of the geologist in development as well as exploration. So much of the attention of geological departments is directed toward the determination of casing points from sample data, that part of the expense of geological departments should be charged off on company accounts to development.

It is believed that higher recoveries obtained, as the result of more careful selection of casing points, amply justify this. The value of sample logs made from drill cuttings is so well established that drillers' logs are no longer used by major companies except in unusual cases where no sample log is available. However, drillers' logs are still filed with the Corporation Commission, this being required by law.

As it is becoming more difficult to locate new fields in the Mid-Continent area, there is increasing appreciation of the importance of deductions which may be drawn from drill cuttings in exploration work. Samples are generally regarded as the key to present oil geology. With the growing interest in the search for pools which exist because of stratigraphic conditions, it is seen that more and more reliance must be placed on samples in order to discover pools of this nature which occur in lenses and wedges. Methods of various kinds by which samples are procured include diamond-core drilling, cable-tool coring and cuttings from the bailer, bit samples obtained in cable-tool and rotary drilling, samples blown from the hole and shot from the hole, and samples obtained in cleaning out. The samples obtained by saving rotary cuttings bulk much larger than those obtained in any other manner.

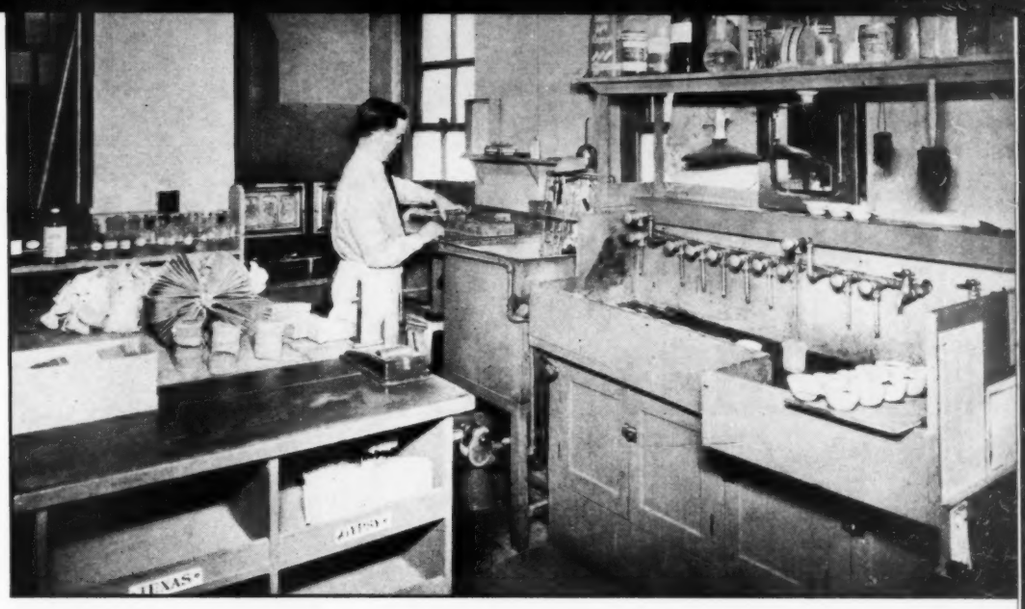
One major oil company has in storage well samples, accumulated in the course of years, representing more than 16,000,000 feet of drilling. At different oil company offices throughout Oklahoma there are more than 150 geologists concentrating on the making of well logs from the examination of samples under the microscope. Samples are gathered and prepared for examination by additional specialized organizations extending into all active areas in the state and adjacent territory.

The vital point in any sample program, whether it be carried on in connection with the mining of minerals or the drilling of oil wells, is the manner in which the samples are obtained. In the drilling of rotary wells a number of difficulties must be constantly reckoned with. Because of the nature of rotary drilling, samples are not like those obtained directly from an ascertained point, but are the by-product of a continuous and somewhat complex operation. The time elapsing, or lag, in the return of the drilling mud, bringing the cuttings to the surface, the constant admixture of cavings from higher formations, and other factors combine to give samples such doubtful appearance as sources of information that their interpretation has often been regarded as untrustworthy from a rule-of-the-thumb point of view. At best they are not the equal of cable-tool cuttings. But with the introduction of microscopic examination of samples in the making of sample logs, the value of deductions from rotary samples has been demonstrated repeatedly.

In the present practice of taking samples it is assumed that in general field operations the most that can be attempted is to get samples at certain regular intervals, usually 10-foot intervals. Sam-

R. L. Roberts, assistant geologist for Transwestern Oil Co., Oklahoma City, logging a well, the data used being derived from the microscopic examination of samples

Important Programs

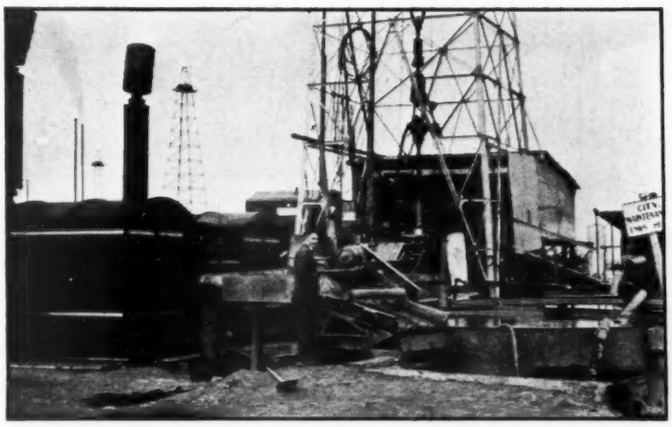


Shell Petroleum Corp. sample washing laboratory at the Tulsa office, showing sink for washing samples by hand, sample washing machine, and dryer. On the table are cloth sacks containing samples sent in from drilling wells and at the end are bins for the cleaned samples

ples are sometimes taken at 20-foot intervals higher up in the well. When approaching important horizons, samples are taken at 5-foot and 1-foot intervals. Closer verification can be had by discontinuing drilling to circulate mud for one-half hour or longer in order to get more reliable samples from the bottom of the hole.

In making up the sample log there is seldom an attempt to compute the depth, from which the sample comes, on the basis of the actual time taken by the drilling mud in bringing the cuttings to the surface. This is because it is recognized that all wells are drilled under similar conditions with the result that the same basis of comparison remains. In other words, a uniform lag is assumed. Unusual situations must be taken into account which effect the velocity of mud-laden fluid, such as large cavities caused by caving.

Certain corrections can be made from notes furnished by the driller. These notes give such facts as the depth of "drilling change," observed when drilling into a formation of definitely different hardness from the one above, measurements, etc. Important corrections can also be made when data is furnished as to changes made in the weight and viscosity of the mud and rate of circulation, also defective pump capacity, and increased or decreased weight on the bit. Whipstocking must be considered. When there is sidetracking, care is taken to see that there is no duplication of samples from the same formations. Electric logs are also used to give valuable data for verifying the sample log.



Vibrating screens have improved the quality of rotary samples by reducing the amount of recirculated cuttings

It is important that samples be taken continuously at regular intervals for the success of determinations from rotary cuttings depends upon the ability to notice slight lithologic and paleontologic changes in the new material present in each successive sample. Difficulties occur if there are "skips" or intervals of missing samples and if material from the unsampled formations cave into the hole while drilling at a greater depth. Regularity of taking the sample is of more importance than the quality of the sample.

Methods of gathering and distributing samples in the Mid-Continent are characterized by features peculiar to operating conditions in the area. They are the outgrowth of recognition of the value of lithological data in the area, over large parts of which there extend a number of alternating hard and soft formations. These formations can be correlated for considerable distances and are readily identified in the course of drilling, together with data obtained by the geologist from the examination of drill cuttings. This situation, combined with the fact that 16 large companies operating in the area have realized what benefits could be had from the free exchange and distribution of samples, has led to the development of a scheme of a highly cooperative nature.

In developing Seminole, samples were saved only from deeper formations, each company wishing to examine cuttings leaving sacks for its private samples. This practice grew to be a nuisance. Therefore, as a first step toward bringing order out of this chaos, only one set of samples was taken at the well and this was subdivided on the spot for companies desiring a "cut." From this has grown the present system by which the operating company drilling the well takes one set of samples, gathered up two or three times a week. Wildcat samples are often picked up daily. In certain cases where a well is on the edge of two or more districts two or three sets of samples may be taken at the well.

Samples are usually given a flushing at the well to wash off the bulk of the drilling mud, but the important washing does not come until the samples are turned over to the company's sample-washer at one of the company offices. After washing, the samples are divided into "cuts" for the companies desiring samples.

The "check" in sample terminology, refers to the entire organization having to do with the preparation and distribution of samples for examination. The check is ruled over by a "czar," who is a company geologist. "Check," as used by scouts, has a different meaning and refers to the meeting at which information is exchanged. In Oklahoma, the principal sample checks are at Oklahoma City, Shawnee, Ardmore and Enid. There is also a check at Tulsa for handling Osage, Creek and Tulsa County samples; and there are also small checks at Ada and Duncan.

Samples are brought in by either a geologist, a scout or a sample grabber. They are turned over to the sample washer of the operating company having the well drilled who rinses, drys and cools the samples before dividing and placing them in envelopes to be distributed to the companies watching the well. In the case of important wells drilled by individuals and companies without sample-washing facilities, the "check" designates one of the companies participating in its organization to take care of the samples from a particular well. In such instances a geologist, scout or sample man arranges with the driller to have samples saved.

At the large check at Shawnee a building is divided with booths allotted to the Amerada, Texas, Shell, Stanolind, Atlantic, and Phillips companies. The general practice is for each company to have its own sample washer.

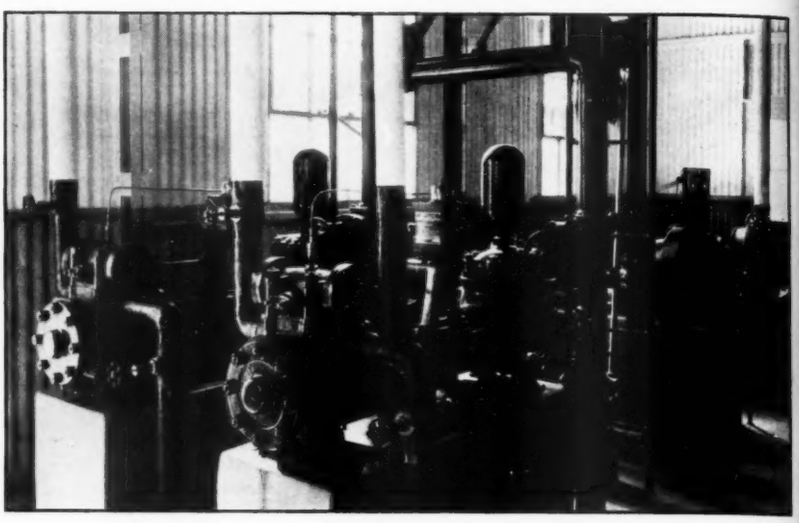
There is some tendency to have sample washing and sample examination done largely in the districts where the samples originate. Although some sample washing is done in the central offices in Tulsa, most of the samples received are the washed samples delivered from field offices in paper envelopes.

Representatives of oil companies at a weekly meeting of the Tulsa "sample check" held in the laboratory of the Atlantic Refining Co.

[1]Geologic Interpretations From Rotary Well Cuttings" by Robert M. Whiteside, Bulletin, American Association of Petroleum Geologists, July, 1932.

Compounded Centrifugal Units Used in New Rodessa Pipe Line Station

By MITCHELL TUCKER



Auxiliary equipment used includes feed pumps and generating equipment

The United Pipe Line Co. has just completed the construction of a highly efficient pipe line station in the Cass County side of the Rodessa field, which features the use of steam-driven centrifugal pumps, compounded to 800 pounds pressure, handling about 20,000 bbls. daily from over 125 well connections.

When this company purchased the East Texas Refining Co.'s 8-inch oil line from the Louisiana side of the Rodessa field to Longview, Tex., the original steam-driven Sexton station was handling all oil from the field. A booster station was on the line at Jefferson, Tex., and terminal was in the East Texas refinery at Longview. As the United company's extensive producing properties were developed westward into Cass County, Texas, the system proved inadequate to handle the increasing volumes. Therefore, this recently completed station, known as its Cass County pipe line station, was built. The Sexton station has also been remodeled and enlarged, as has the Jefferson booster station also.

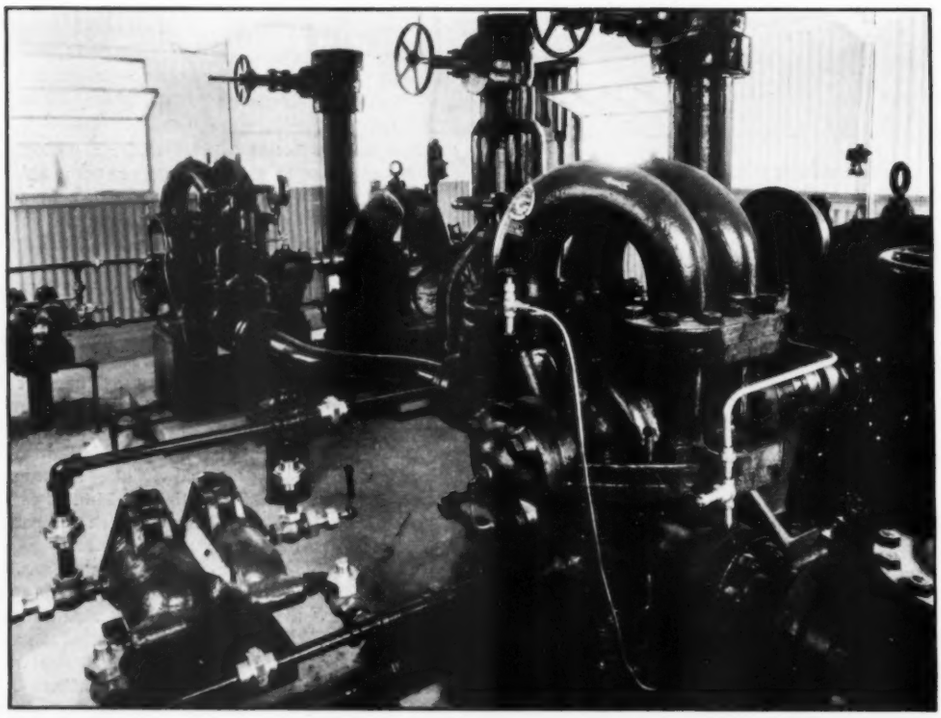
Method of Operation

Oil from the field gathering system is pumped by steam-operated lease pumps into an 80,000- or 55,000-bbl. storage tank at the Cass County station site. From this point it gravitates to the pump house where it is picked up by the centrifugal pumps, driven by steam turbines.

The first 170-hp. steam turbine, operating at 250 pounds steam pressure and at 3,550 r.p.m., drives a 3-inch crude-oil pump. The pump picks up the oil from gravity and discharges it at 400 pounds to the next unit of identical type at the plant, which is compounded to the first, and the crude is boosted to 800 pounds pressure. At this pressure it is released to the main line.

Three 300-hp. fully insulated, 3-burner boilers are installed in a separate boiler house. These operate on pressures from 250 to 270 pounds, and supply steam for the turbines and all auxiliary purposes. The battery of boilers is automatically operated in every respect. Gas volumes and pressure to the burners are controlled to conform with volumes of water fed from the feed pumps. Approximately 45 bbls. of water are used here hourly. Gas consumption is approximately 500,000 feet per day while operating at full capacity.

Gas is received from the company's residue gas system. Likewise, the company's water system supplies water from a nearby 700-foot water well, flowed by a steam-operated air jammer. Water from this level is relatively pure, and requires no treatment.



Pump house, handling about 20,000 bbls. daily by use of two centrifugal pumps driven by steam turbines, operating in compound to give an output pressure of 800 pounds

Water Preheating System

Water from the system is first run to an overhead preheater in the boiler house, where it is raised to a temperature of about 150° F. by a portion of exhaust steam from the turbines. It is then delivered to the boiler feed pumps at this temperature.

Electric generating equipment is installed in the boiler house and consists of two 15-hp. steam turbines, operating at 1,880 r.p.m. and driving through direct transmission 3-phase 208/120 volt, 8 kw. generators. Automatic temperature and flow meters are installed to provide accurate check and record of crude movements through the station.

At the present time the Sexton and Cass County stations do not operate simultaneously. One station pumps until its storage is reduced to the desired point, and then the other cuts in. Present enlargement plans include means whereby the two stations can be operated at the same time if desired. The majority of the oil from this line is being delivered to Shell Petroleum Corp. at its storage farm between Longview and Kilgore, Tex., and the remainder goes to the nearby Atlantic Oil & Refining Co. tank farm.

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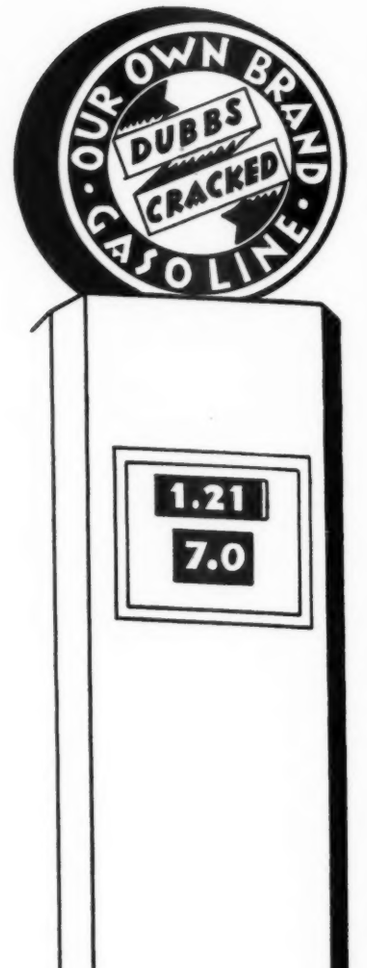
Photograph above is typical of Mission service on this lease and everywhere.

Two name gasoline



Wilshire Oil Company began Dubbscracking last summer, making twice as much gasoline as they had ever made before

California motorists didn't know about Dubbscracked gasoline but they knew Wilshire

Wilshire knew the value of linking its own good name with Dubbscracking—and did it

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Extension Well in El Segundo Field Completed by Unusual Practices

By T. P. SANDERS

The El Segundo field in the Los Angeles Basin was extended to the west into territory formerly considered to be of questionable possibilities when the Texas Co. completed its No. 1 Security as the largest producer in the field on March 24, 1937. The initial production was 3,080 bbls. during the first day through a three-quarters inch flow bean, but on March 25 it had increased to nearly 4,200 bbls. Flow pressures at present indicate that this well would exceed 6,000 bbls. on an open flow test. The productive horizon penetrated is common to the rest of the El Segundo field, to Del Rey Hills and the Venice field. Gas is being produced at the rate of 4,000,000 feet per day with 27.3 gravity crude. The well was drilled to a depth of 7,256 feet in the Franciscan schist, above which about 20 feet of oil sand is found. The completion of this semiwildcat in a very irregular producing formation just above the basement complex of the area comprises an unusual story of modern drilling practices.

Since its discovery in August, 1935, the El Segundo field has been in process of orderly development, and it was thought before the advent of this completion that the producing structure had been defined in a general way. The production is being obtained from a zone of sand and conglomerate which lies between the Nodular shale of Miocene age and the Franciscan schist, which is considered the depth limit for oil possibilities on the Pacific Coast. The productive zone is unconformable with the strata both above and below it, and varies widely in thickness and depth. Structurally, it overlies a schist ridge. The wells previously completed to the east of the location of No. 1 Security showed the pay zone to be dipping toward the west, which would indicate that this well would encounter the sand at a greater depth than other wells of the field.

In drilling Los Angeles Basin wells it has long been standard practice to core through all portions of the section where it is necessary to obtain information concerning productive possibilities and the selection of casing points. On wildcat wells coring is almost continuous throughout strata of oil-bearing possibilities, but where tests are drilled close to producing wells and definite correlations can be determined, coring is resorted to less frequently.

In either case samples of drill cuttings are not caught and examined, as logs plotted from cuttings are considered unnecessary and of questionable accuracy in this area. On No. 1 Security it was decided, after a careful study of core logs on neighboring wells, that if coring were started at 7,250 feet the Nodular shale and the productive zone could be accurately located. At about 7,200 feet coring was commenced.

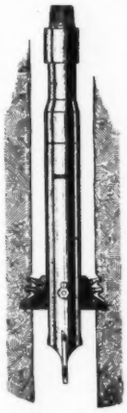
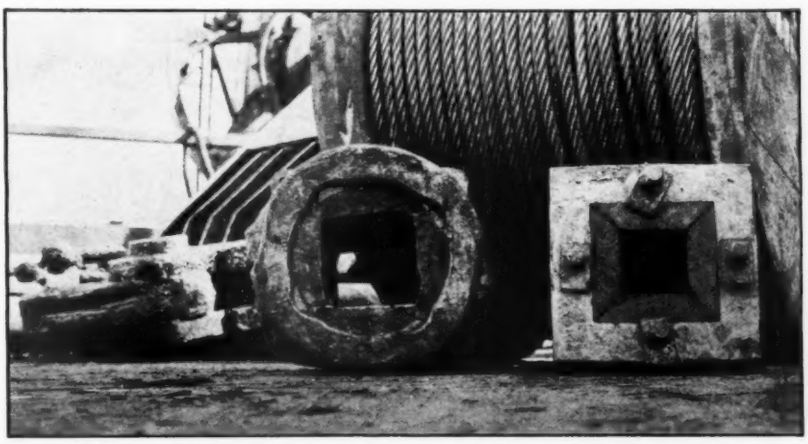


Diagram of the wall sampler with the sampling tubes in the extended position

The first core recovered showed the bottom of the hole to be in schist. The question naturally arose as to whether or not this actually was Franciscan schist in place. Coring was continued to a depth of 7,256 feet, showing only schist, which was taken as evidence that the hole had encountered the Franciscan formation. It was therefore concluded that the oil sand had either pinched out between this location and the wells to the east, or folding, faulting, or irregular deposition had caused it to occur higher. Since the first hypothesis was thought more likely, it was believed that abandonment might be found necessary. An electrical log of the hole was then made in hope of disclosing favorable conditions. The results indicated that the productive zone was about 200 feet higher than in other wells of the field.



At the left is seen the rubber kelly-bushing with hardwood inserts which was used in the drilling of No. 1 Security

In order to check the electrical log and determine the top and bottom of the oil-saturated zone, a wall sampler was run. With this tool it is possible to obtain formation cores from the walls of the open hole at any point desired. The cores range from 1¼ to 2½ inches in length, and from seven-sixteenths to eleven-sixteenths inch in diameter, and are taken by means of four tubes inserted in blades which are substituted for the cutting blades in a Baker wall scraper.

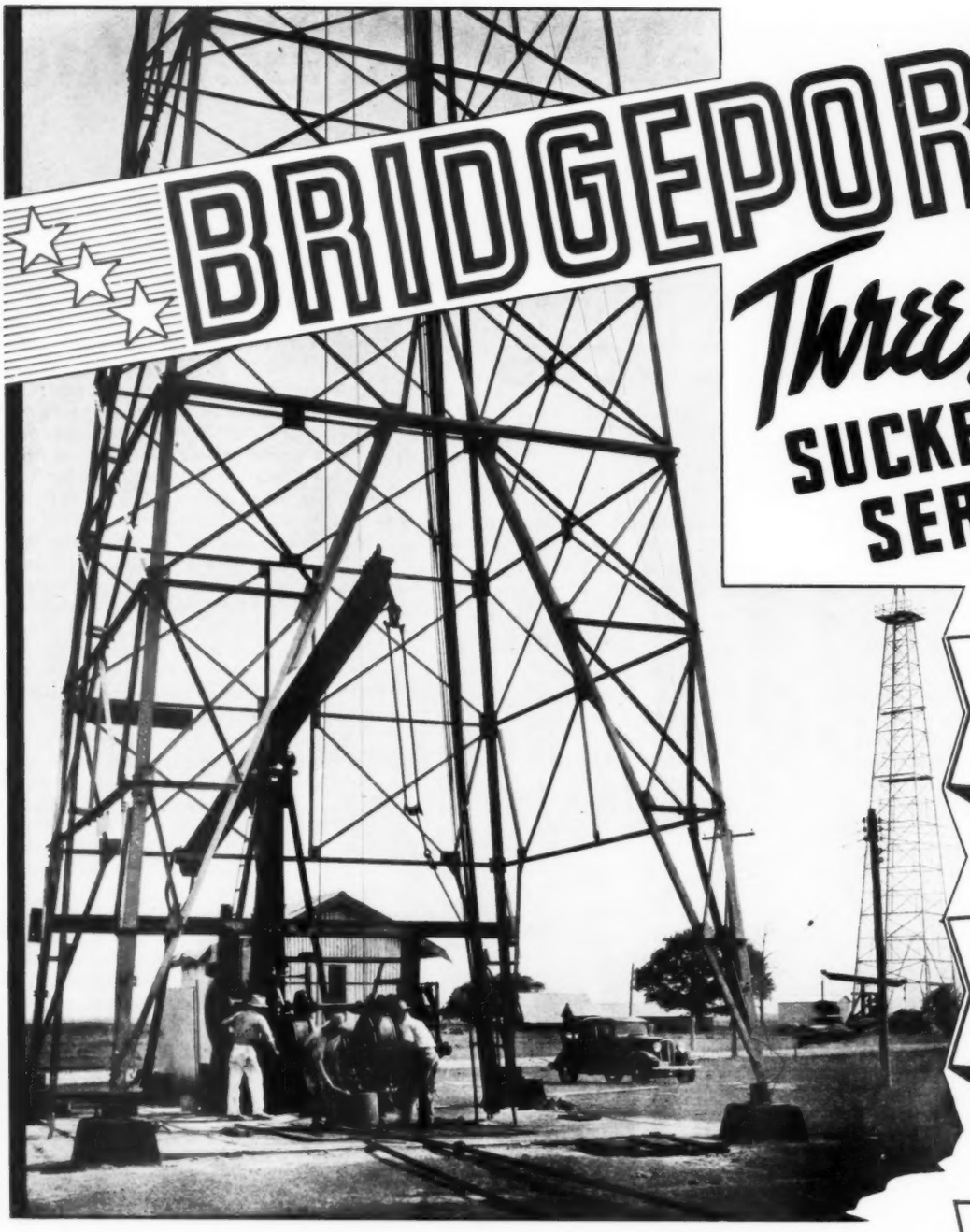
When the wall sampler is run into the hole on the drill pipe, the two blades upon which the core tubes are mounted are closed into the body of the tool. When the point is reached where the samples are to be taken, pump pressure is applied to the drill pipe at the surface. This forces the tube-carrying blades outward and upward against the wall of the hole by means of a piston in the body of the tool. The weight of the drill pipe is then applied, which forces the sharp, hard steel tubes into the formation so that a sample is forced into each tube. The weight of the drill pipe also imbeds the base of the blade in the wall of the hole and prevents the tool from being forced downward. During this operation the pumps are kept running, but the drill pipe is not rotated.

When the pump pressure is removed from the drill pipe and the weight of the pipe is picked up, the tube-carrying blades close into the body of the tool to permit removal from the hole. Samples were taken at 5-foot intervals from 7,165 to 7,200 feet. The uppermost test showed Nodular shale, while the lowest showed schist. The intermediate samples verified the indication of the electrical log that the zone was oil-bearing, and were used in studying its physical characteristics.

With the bottom-hole conditions understood, a casing point was selected and 7,167 feet of 8⅝-inch water string was set and cemented. A 6⅝-inch perforated steel liner was set at 7,251 feet. The only other casing used was the surface string, which was set at 1,009 feet. On this well a new item of drilling equipment used by the Taft Well-Drilling Co., who drilled the well under contract, was a rubber kelly-bushing. This was made of fairly hard rubber, inside of which were inserted pieces of hardwood to fit either a 6-inch or a 4-inch square kelly. This was used to reduce the noise at the rotary table and reduce the wear on the kelly-joint by causing the hardwood to wear instead.

Casing pressures as high as 1,040 pounds, and tubing pressures as high as 890 pounds have been recorded on No. 1 Security. Immediate arrangements were made to take the gas produced with the oil to the nearby Richfield gasoline plant for stripping of gasoline vapors and delivery to a distributing system for industrial and domestic use.

Had this test found the productive zone at the depth where it was expected, instead of more than 200 feet higher, it would have been a much smaller well. However, the prolific nature of the well does not definitely establish the general productivity of the newly proved area, in as much as indications to date point to wide variations in porosity and thickness.



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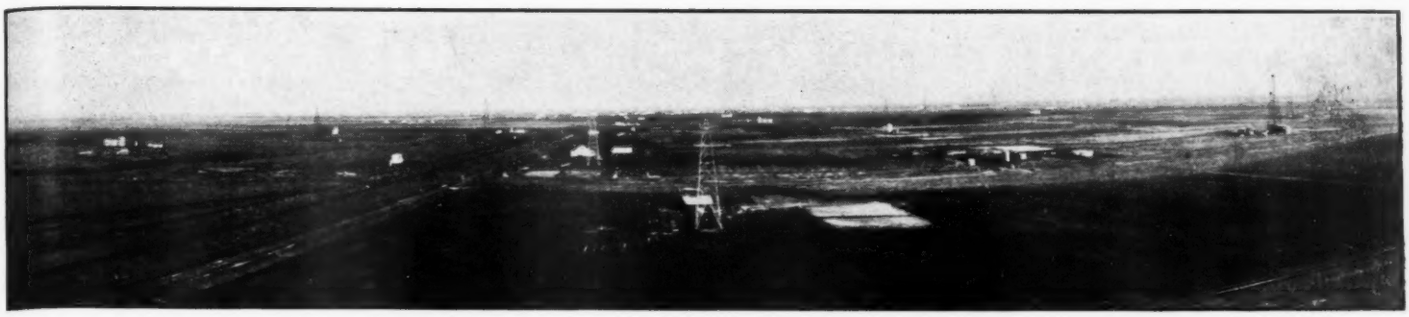
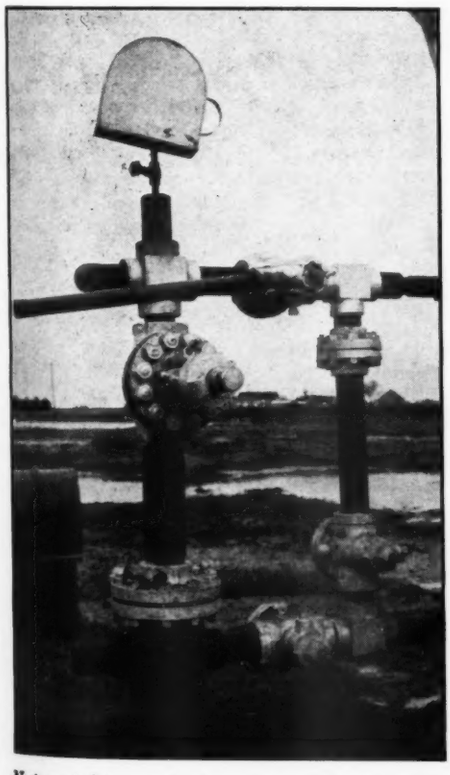


This is a portion of the Placedo oil field, Victoria County, Texas

Improved Completion Methods Make Good Wells

By L. G. E. BIGNELL

A completion problem peculiar to the upper portion of the Greta sand in the Placedo field, Victoria county, Texas, has been solved by engineers for the Barnsdall Oil Co. and in so doing a very productive oil field was developed commercially. Completion of oil wells in the clean section of the Greta sand has never presented any unusual problems but the upper portion of the Greta sand is shaly and becomes very sticky and non-permeable upon being wetted with water. This has made the completion of wells in this formation, found at about 4,700 feet in this field, somewhat difficult until the Barnsdall engineers worked out a satisfactory means of overcoming this difficulty.



Not a nightcap—just a cover over a pressure gauge on a Barnsdall Oil Co. well, Placedo field

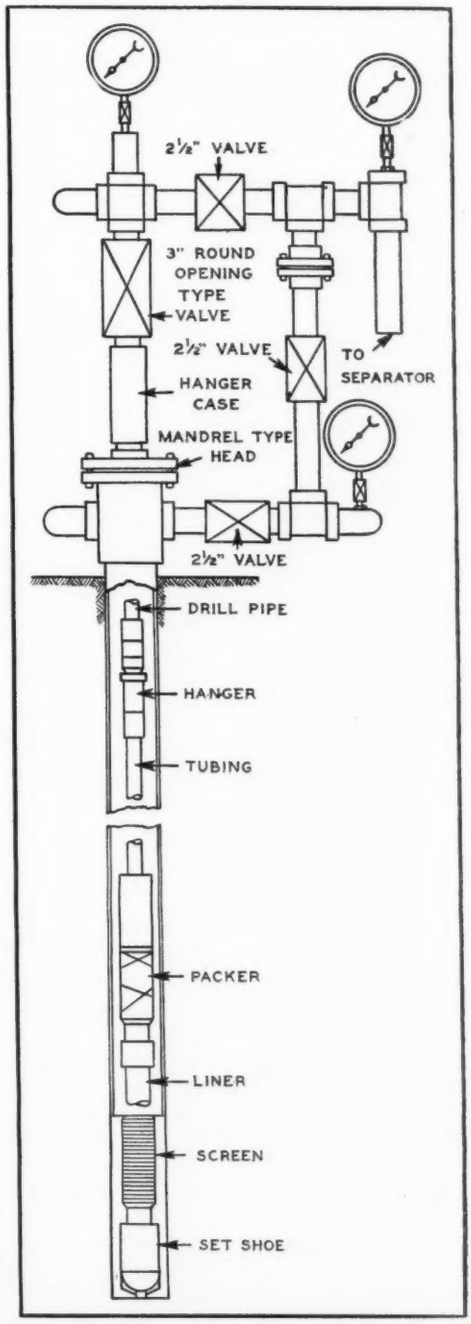
Practically all Gulf Coast wells are completed with screen pipe and before the new completion method was perfected these screens became clogged with shale, sand and foreign material after wells in the Placedo field had been on production for a few hours.

It is usual practice to start these rotary wells with 12½-inch hole and set about 800 feet of 10-inch casing which is cemented and fitted with master gate and blow-out preventer which are used while the 8¼-inch hole is drilled to the Greta sand at a depth of about 4,700 feet. The hole may be drilled into the producing formation or to the top of the pay before the string of 7-inch casing is run and cemented.

In drilling the hole below the 10-inch casing 9½ to 10 pound mud is used which has been found heavy enough to control the formation pressure when drilling into the pay section of the Greta sand. The mud is usually mixed with tannic acid to maintain low viscosity which makes for better handling.

When the string of 7-inch casing has been set the master gate and blow-out preventer on the 10-inch casing has been removed and the 7-inch string fitted with a Hughes-Brown flow head which permits the running of tubing, screen, liner packer and setting equipment with the well under complete control.

The procedure in running this assembly is first to attach set shoe on the bottom of the lowest joint of screen. Screen and liner are then assembled and suspended in the rotary until the latching-in tool is screwed on to the first joint of tubing to be run in the liner. Enough tubing is then attached to the first joint to stick up three or four feet above the top of the liner. The assembled tubing with the latching-on tool is then run into the screen and liner suspended in the rotary and the tool latched into the set shoe. A section of tubing is then picked up with elevators, the packer is pulled up over the tubing section and held by cat-line while the



Generalized drawing of hook-up used in wells in Placedo field, Texas

tubing section is screwed into the collapsing tool used to set the packer later. The packer is then screwed into the liner, and the liner is ready to run into the hole on the string of 2- or 2½-inch tubing in the usual manner. The tubing is filled with mud fluid at intervals to equalize inside and outside pressures.

With the equipment used the liner is hung from the lower end of the tubing which is connected at the bottom of the liner. The space around the tubing where it enters the top of the liner is open so that mud in the hole when the assembly is run can enter freely into the liner and screen pipe and equalize pressures inside and out. With this condition there is no tendency for shale, or other material to collect on the outside of the screens and plug them. This aids materially in completing the well because under the old assembly screens have been so plugged that it required a high pump pressure to clean them after they had been pulled out of the hole.

Still using the flow head, when the bottom of the hole is reached a tubing hanger is put on the upper end of the tubing in a position predetermined to properly space the screen and set shoe a desired distance off bottom of the hole. It is usual practice to suspend the set shoe about 6 inches off bottom.

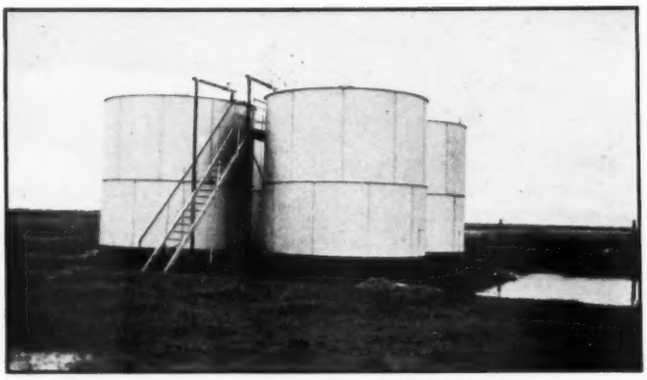
The christmas-tree assembly is then fitted to the top of the 7-inch casing and in this christmas-tree assembly a stuffing box is placed so that drill pipe landing joint can be run through the head fittings and attached to the upper end of the tubing hanger. The landing joints may be of any desired length to accommodate individual well conditions. This hook-up permits the handling of the string of tubing and the screen and liner at the bottom of the well as desired while the washing in of the well is being carried on.

With the set shoe and screen suspended about 6 inches off bottom of the hole and the hole full of 9½- to 10-pound mud it is necessary to pump clear water into the well to wash out the mud. Sometimes the well will start to flow naturally after this mud has been displaced with the clear water and under such conditions the water is displaced by the oil from the formation. If the well does not start to flow with the clear water in the hole it is then necessary to pump oil into the tubing to displace the water.

The producing section of the Greta sand has to be cleaned of loose shale and sand and this is partially accomplished by pumping the water down the tubing and out of a check valve in the set shoe and up on the outside of the perforated screen and liner and permitting this mud and sand to escape into the well and pass up the casing before the packer on the top of the liner is set inside of the bottom of the casing.

The liner used inside of the 7-inch casing is usually 5-inch diameter. After the hole is filled with clear water and the well will not kick off naturally the next step is to pump in crude oil to displace this water. When the returns at the surface show crude oil it is known the water is out of the hole. When either clear water or crude oil is pumped into the well it is common practice to shut the pump down at frequent intervals to note whether the flow continues which would indicate that the well was on natural flow.

When the well starts to flow naturally it is permitted to so produce for from 20 minutes to one hour to clean from the face of the producing formation and behind the screen pipe all material that has accumulated on the face of the sand. It has been found that under the head of mud fluid or water in the hole shale and other loose material



Neatly painted and well kept steel tank battery in Placedo field

will tend to collect against the face of the producing formation and is held there by the differential pressure which is at that time in favor of the fluid column in the hole. As soon as the hydrostatic pressure of the fluid column is less than the formation pressure the oil and gas starts to leave the formation and all foreign material accumulated against the face of the sand is washed off and carried upward with the stream of oil.

Experience has indicated how long to allow the well to flow before the packer on the top of the liner is set inside of the casing. Setting the packer is done by lowering the liner and screen pipe to the bottom of the hole and unlatching the tubing. The drill pipe landing joint at the top of the hole is used to handle the tubing and liner assembly and the tubing is detached by giving it seven turns to the right.

The tubing is then raised and the pump again started indicating the liner has been left at the bottom of the hole. Tubing is then raised enough so that the collapsing tool is above the setting shoulder at the top of packer on upper end of liner. The tubing is then lowered and the weight of the string will shear the pins and collapse the packer. The tubing is then raised and hung and the drill pipe landing joint is backed out of the hanger and pulled above the top valve on the christmas-tree. This valve is then closed and the drill pipe landing joint is pulled out of the stuffing box.

The particular new practice developed by the engineers for the Barnsdall Oil Co. was allowing

This old boiler still serves as heater for treating cut oil in Placedo field, Texas

the well to produce before setting the packer, thus clearing all foreign accumulations from behind the screen pipe with its minute openings and flowing this shale and other waste up the hole well above the producing formation so that only clear oil flows against the outside of the screens after packer is set. If the packer is set before this muck has been displaced from behind the screen it will be packed against the fine screen openings as soon as the well starts to flow naturally and the formation pressure imparted to the gas and oil will hold this foreign material against the outside of the screen and eventually shut off all flow from the well.

The christmas-tree assembly consists of Merco Nordstrom 5,000-pound test valves and the well is usually produced through a choke. The gas-oil ratio varies from 400 to 1,000 feet of gas per barrel of oil. The Barnsdall, Felmont, and Darby No. 2 Smith well, the first producer to be completed in the Greta sand body, made 790 bbls. of oil per day through a quarter-inch choke. Since then 105 additional oil wells and 9 gas wells have been completed in the Greta sand. The total allowable for the field is about 7,300 bbls. of oil per day.

The Placedo field was discovered in April, 1935, by the completion of the Superior Oil and Gas Company and Gillespie et al No. 1 Henderson and Pickering in the Frio sand topped at 6,606 feet. Two offset wells failed to find the discovery sand, which apparently is a lense. The East Texas No. 1 Henderson and Pickering found the sand at 5,986 to 6,000 feet which produced gas. The Superior No. 1 Farber failed to find that sand. The Mortex Mitchell, an outpost well, found the sand hard, shaly and gas bearing.

The Costa No. 1 Schovajsa, the Smith No. 1 Lala and the Smith No. 1. Wright all attempted to complete wells in the upper and dirty portion of the Greta sand but because of the method of completion used these wells would not flow. The Wright and Lala wells were deepened and the Wright well produced from the white Greta sand and the Lala well produced from a sand found at 6,002 feet.

The Superior and Gillespie interests have completed two wells in the lower Stringer sand, one of which is now dead after producing 12,500 bbls. of oil. These wells had high pressure while the wells completed in the Greta sand proper have low pressures.

The Crown Central No. 1 Schovajsa and the Westgate Oil Co. No. 1 Henderson and Pickering well made gas from the lower Stringer sand although casing was set in the upper part of the Greta sand proper. The Westgate Oil Co. well caught fire and burned for several days, after coming in unexpectedly as a gas well before proper connections were installed.

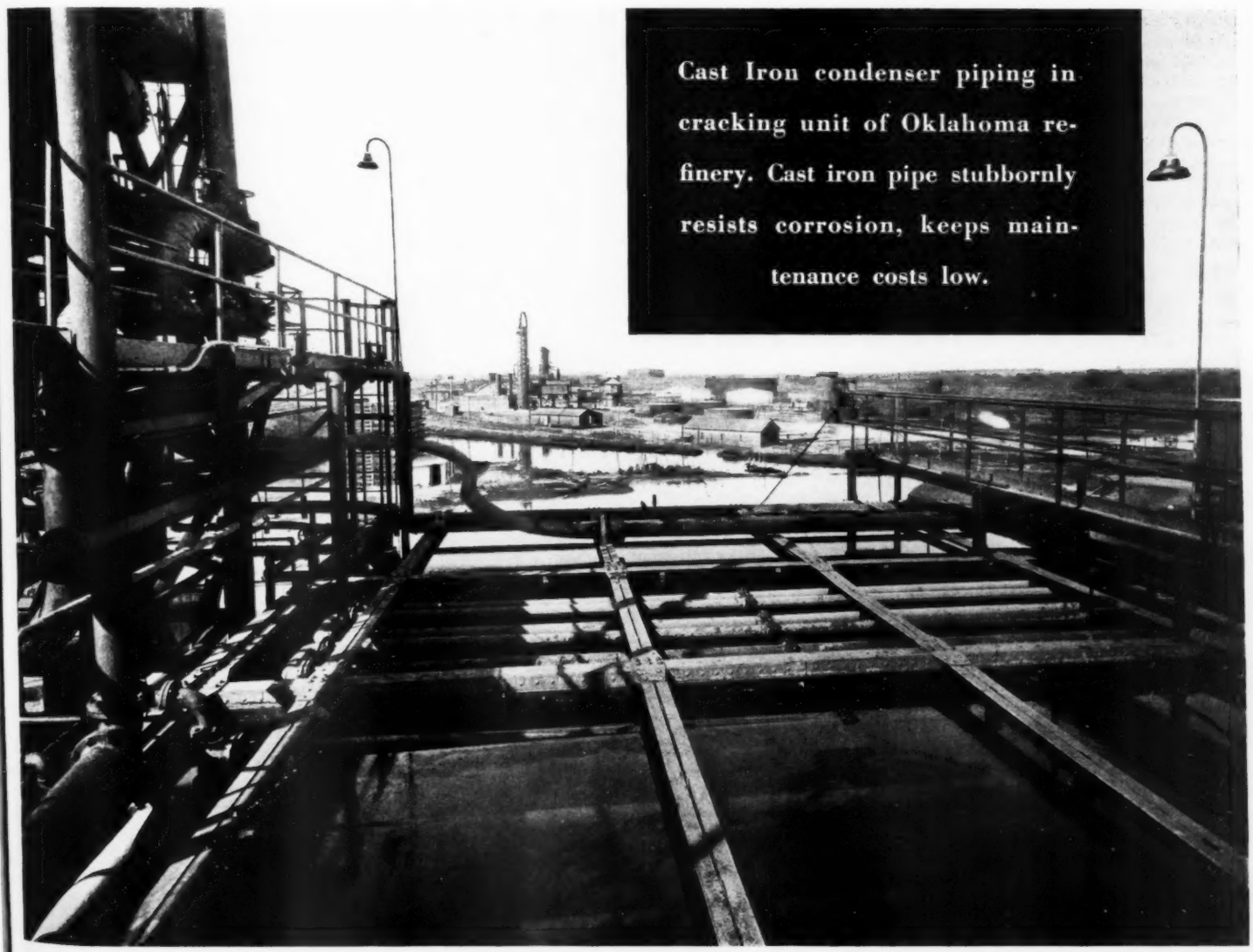
The third deep producer completed in the field was the Barnsdall and Felmont's No. 1 Pickering and Ross, which was finished in January, 1936, at a total depth of 5,950 feet, for 450 bbls. of oil per day. This well was completed in the top of the Third Frio sand, and went dead after producing about 15,000 bbls. of oil. The well was plugged back and successfully completed in the Greta sand.

The fourth deep test was made by Barnsdall, Felmont and Darby No. 2 Smith, which encountered the Greta sand body too low to produce, and was drilled to a total depth of 6,035 feet. It was completed for 790 bbls. daily, through a quarter inch choke. This sand represents the uppermost portion of the Tom O'Connor sand series. This well has been an excellent producer.

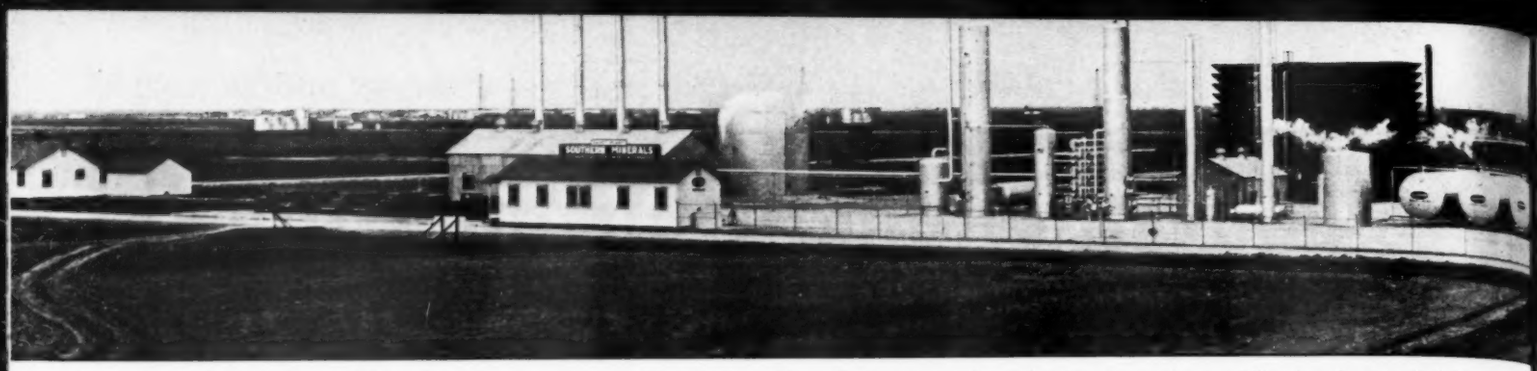
(Continued on Page 55)

Recipe for long-lived pipe lines: SPECIFY CAST IRON PIPE

Put cast iron pipe to work wherever the job calls for stubborn resistance to corrosion. It will help to lower the cost of plant maintenance by saving the expensive replacements necessitated by shorter-lived pipe. Its cost, measured by long service, is low. Its value, if scrapped, is intrinsic. Its usefulness in the modern refinery as a dependable, corrosion-resistant conduit material is increasingly recognized. Cast iron pipe is available in bell-and-spigot, plain and threaded ends, and flanged types, or with bottle-tight mechanical joints. Diameters from 1¼ to 84 inches. For further information write to The Cast Iron Pipe Research Ass'n, Thos. F. Wolfe, Research Engineer, 1013 Peoples Gas Bldg., Chicago, Ill.



Cast Iron condenser piping in cracking unit of Oklahoma refinery. Cast iron pipe stubbornly resists corrosion, keeps maintenance costs low.



Saxet plant of the Southern Minerals Corp. near Corpus Christi, Tex. Here Frio gas sand production from the rapidly developing field is gathered for extraction of 18-pound natural gasoline

Kerosene Used as Absorption Medium in New Saxet Plant

By GEORGE WEBER

An important addition was recently made to the natural gasoline industry on the Texas Gulf Coast. The Southern Minerals Corp. of Corpus Christi is now nearing its second month of continuous operation of an absorption plant in the Saxet field of Nueces County, and further expansion of its facilities is already in progress. The rapidly developing crude and gas production in the Saxet field has far exceeded original estimates of company engineers, and at the outset of operations, the plant is running in excess of capacity.

Plans for enlargement of the plant have been completed; the new additions doubling present capacity of the unit. Expenditure for the new project will cover a duplication of the present absorber, a 255-ton refrigeration system, and a propane-butane recovery unit. The contract, on a turn-key basis has been awarded the Western Supply Co., of Tulsa.

Frio Gases Productive

With the additional units, the company proposes to process 35,000,000 feet of gas. The major portion of the increase in gas take will be from the deeper productive zones in Saxet: Namely the 6,300-, 6,700- and 6,900-foot sands.

Construction of the original plant was begun in early January. The company has included in the plant gathering system, the production not only of its own wells, for it is a major producer in the field, but also that from leases of other operators who have production from the Frio horizons of Saxet. The unpredictable expansion of this horizon and the addition of further reserves in lower sands, however, brought the supply to a figure far exceeding the capacity of the plant as originally designed.

In a survey made last year, the gas produced with 38.4-gravity crude in the 5,800-foot Frio horizon was found to be the only type in the field suitable for the manufacture of natural gasoline. Other sands, such as the 4,400-foot and 4,590-foot Clarkwood, the 4,800-foot New Saxet and the several shallow horizons produced a gas too dry for consideration. The added reserves opened in the Frio sands below 6,000 feet since the first of the year, however, have shown a content similar to the 5,800-foot gas, and have greatly enlarged the supply of wet gas available to the company.

Analysis of Gas

The analysis of a typical sample of the 5,800-foot gas, which represents the principal current charge to the plant is shown below:

Component—	Pct. by volume
Methane	84.67
Ethane	6.57
Propane	4.76
Iso-butane	1.15
N-butane	1.40
Iso-pentane	0.44
N-pentane	0.32
Hexanes and heavier	0.69

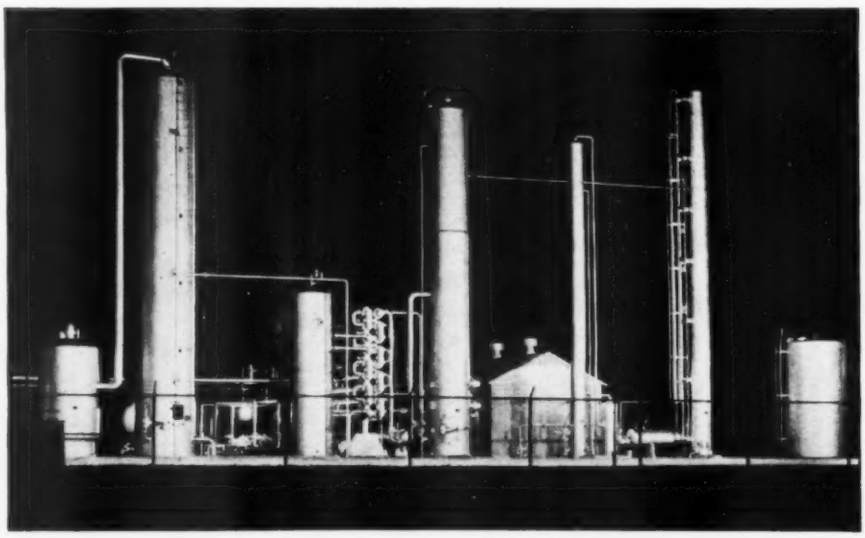
The new plant is the conventional well-pressure type of absorption unit, utilizing a 41-gravity kerosene as the absorption medium. The oil circulating pumps are steam turbine-tandem driven units. A 7-foot primary absorber and a 2-foot reabsorber, having 16 trays each, provide sufficient contact of the counter-current fluids for absorption of the heavier gas fractions. At present, with a total gas take of 27,000,000 feet per day, the primary absorber is operated at a pressure of 38 pounds gauge. The plant was originally designed to handle 20,000,000 feet at 30 pounds, but the unexpected expansion of field supply has necessitated the change in operating conditions at a 35 per cent overload.

Features of the combined still and dephlegmator include a built-in vent section, and heat elements in the two bottom trays of the column. These built-in heat elements operate to permit a reduction in partial pressure steam requirements because of higher temperature in the still base. Exhaust steam from the make room pumps is superheated and serves as the agitation steam required in the still.

Stabilizing Equipment

The 30-tray stabilizer is of conventional design, equipped with an atmospheric type reflux condenser and an outside kettle or reboiler, connected to the column base. The cooling tower is an open type, eight-bay unit. A pump pit has been provided to allow a slight head on the suction side of the cooling water pumps. The steam turbine-driven pumps are duplicated for stand-by service, and the piping for one of the units has been so arranged that the pump serves the plant yard fire system.

Steam generation is handled by four 200-pound working steam pressure, 125-hp. oil-country boilers. These are operated in a three-stage system, consisting of one atmospheric heater and two condensate receivers. The low-pressure receiver operates at 40 pounds and the final receiver at 125 pounds gauge. Condensate from the preheater and superheater is returned to the latter. This arrangement gives a final feedwater temperature of 353° F. In as much as the plant is supplied with water from a line nearly 3 miles away, a 2,000-bbl. emergency storage tank is installed directly behind the boiler house. The



As shown, the plant is entirely lighted by a flood system at night

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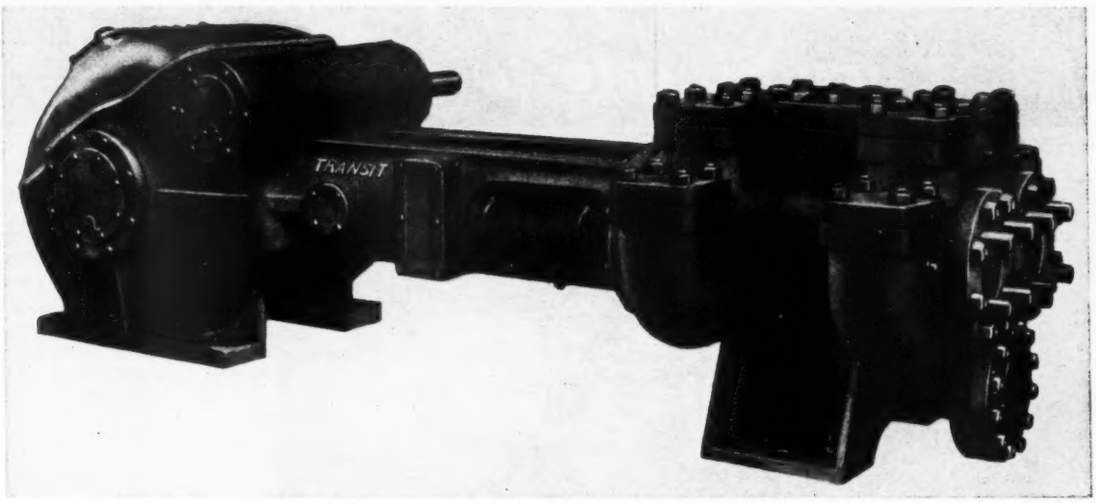

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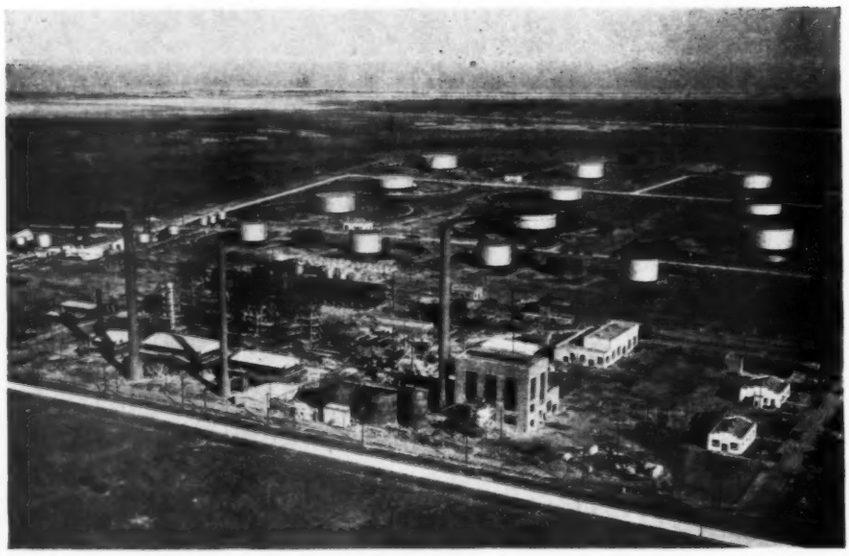

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following is an analysis of the raw feed-water as taken from the Nueces River at Calallen:

	Gr. per gal.
Total hardness—as $CaCO_3$	14.5
Bicarbonates—as $CaCO_3$	11.7
Chlorides—as NaCl	13.7
Dissolved silica—as SiO_2	*12.3
Suspended silica—as SiO_2	*10.7
Alumina	*1.7

*Parts per million.

Storage capacity at the plant is small because of the fact that the production is pumped almost daily to the Hanlon-Buchanan, Inc., blending station located on the turning basin of Corpus Christi Harbor. A 6½-mile, 3½-inch gasoline line was laid by the affiliated Southern Pipe Line Co. from the plant site in the field to the company terminal at Avery Point. There the stabilized natural gasoline is blended with Saxet Frio crude produced by the Southern Minerals Corp. for tanker shipment to export markets. The total production of 18-pound natural at present is approximately 10,500 gallons per day.

A new foreign market for the product created by the company readily absorbs the entire plant's production, eliminating the factor of domestic competition with other operators in the area.

Operation of the plant has been rendered as automatic as possible by installation of the latest type of control instruments. In addition, indicating flow meters have been placed on the oil lines to the absorbers, the partial pressure or agitation steam-line to the base of the still, and the reflux lines to the dephlegmator and stabilizer, thus permitting an accurate analysis of operations at all times.

The installation of this plant and its expansion attending the development of added gas production guarantees the recovery of a valuable natural resource in Saxet. The work of Southern Minerals Corp. thus constitutes an important step in the conservation of a product previously wasted by flaring in the field.

IMPROVED METHODS

(Continued from Page 50)

After the drilling of these wells, it was deemed advisable to develop the 4,700 foot Greta sand before doing any further deep drilling. However, Pickering No. 13 missed the Greta sand and was continued to a total depth of 5,911 feet and topped the Frio sand at 5,902 feet. This well was completed March 15 and tested 272.40 bbls. of oil through a 5/32nd inch choke. The well is located 2,100 feet from the NW line and 300 feet from the NE line of lot 4, and has extended the deep sand producing area one-half mile to the southeast.

By electric logging it has been found that the Catahoula sand body continues to rise the coastward or southeast side, whereas the Greta sand dips townward. This made an abnormally high structure-like feature in the Catahoula sand, but as yet it has not carried more than questionable gas odors.

Without considering the structure indicated on the southeast based upon geophysics and general subsurface data it is estimated there is a total reserve in the field of approximately 35,000,000 bbls. of oil, of which Barnsdall Co. own about one-third.

A 6-inch pipe line is being laid from the field to the new Barnsdall refinery at Corpus Christi, Texas, thus affording an outlet for about 5,000 bbls. of oil daily to the refinery.

Other companies having major interests in the Placedo field are Shell Petroleum Corp., Superior Oil Co., Magnolia Petroleum Co., and Westgate Oil Co. There are a total of 107 producing wells in the 3,500 acres making up this field. Eight wells are now drilling.

Former Crude Line Is Used for Moving Kerosene to Coast

By MITCHELL TUCKER

The movement of large volumes or slugs of kerosene through a gasoline line, with surprisingly small loss of volume, color, or flash, is being accomplished by the Arkansas Fuel Oil Co. from Bossier City, Louisiana, (near Shreveport), to its marine terminal at Port Neches, a distance of 189 miles.

Movement is made through the Texas Co.'s 8-inch line formerly used for crude transportation, but which has been leased during the last several years by Arkansas Fuel Oil Co. for movement of its gasolines. Originally only shipments of amber (trade color) gasoline were made through this line, and its movement considered entirely satisfactory. The company also makes a white gasoline which was being shipped by tankcar, and experiments were begun about the middle of 1934 to determine desirability of moving the white product in small batches through the line used for amber colored product. At first only small batches were moved. The following tabulation shows effect upon Saybolt color at destination on the white gasoline:

Barrels	Date	Saybolt color of white gasoline
1046	5- 7-34	21
2084	7-19-34	22
5058	11- 1-34	18
15,276	2-17-35	30

From experimentation in moving the white gasoline it appeared that the transportation of kerosene would be practical, and worthy of trial. New stock tanks and terminal facilities were provided at Port Neches to care for the kerosene which formerly had been shipped there by tankcar.

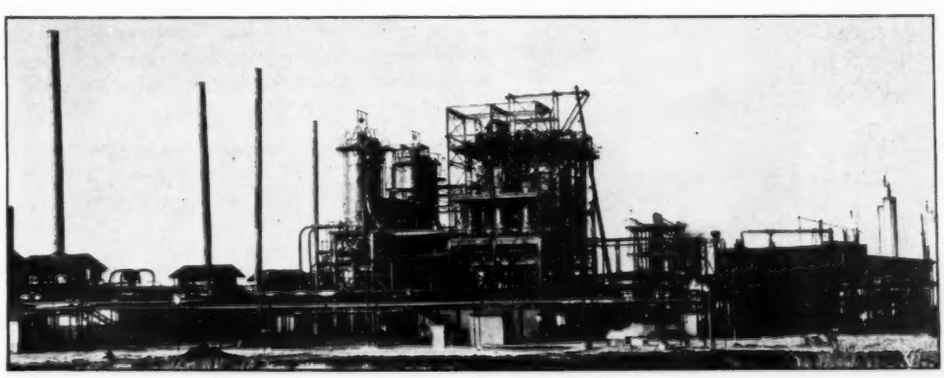
The first slug of kerosene was moved in October, 1936, and consisted of 125,000 bbls. In order to provide detailed data on contamination and other essential particulars, very close study was made of this original shipment. Sampling points in the main line were established at Logansport, La., San Augustine, Jasper and Bunker Hill Stations, Texas, which afforded opportunity to check changes in physical properties of the products, and degree of contamination at each of the intermediate points. The laboratory facilities at Port Neches enabled the final tests to be conducted in proper manner.

Procedure was to run a slug of amber colored gasoline, with a slug of white gasoline, then the kerosene movement, followed by a final slug of white gasoline. The amount of mixture of these three products was observed at the intermediate testing points by the use of thermo-hydrometers, which gave indications of gravity and closed cup flash point tests. At Port Neches, color determinations and distillations for endpoints were also made. Tests here were necessary in order to determine exactly when contaminated or mixed materials were flowing in the line, diverting this stream into the "slop" tank when necessary, and flowing the marketable materials up to rigid specifications into stock tanks.

The original movement was considered so successful that practice was continued. On subsequent movements sampling has not been done at intermediate points, but very accurate records have been maintained at the coastal terminal.

The second movement comprised 92,000 bbls. of kerosene, out of which there was received about 89,000 bbls. in the tanks at Port Neches. This product had an original flash point of 130 in Bossier City, and tested from 123 to 126 after transmission to the coast. About 2,000 bbls. of white gasoline was run ahead of this kerosene. Color from white gasoline went up from an amber of minus 5 to about 25 Saybolt within 304 bbls. Of the 2,000 bbls. white gasoline moved with the kerosene, about 1,700 bbls. was received at Port Neches with a color of 25 Saybolt or better. There was a "slop" cut of about 2,800 bbls. on the terminal stream until flash had reached 114, and at this point the stream was switched to kerosene storage tanks, and the 89,000 bbls. received. At the end of this slug there was a very sharp drop in flash, and 570 bbls. of gasoline and kerosene were run to "slop."

The third movement of kerosene was begun on January 30, 1937. Nineteen hundred bbls. of white gasoline were first run (out of which 1,500 bbls. was recovered as white material at the coast). Following this, 68,620 bbls. of kerosene were run, out of which 66,000 bbls. were saved. Behind this kerosene another 41,000 bbl. slug of the same product was run, out of which 40,000 bbls. were saved, the remainder being accounted for as "slop." A cut of 2,000 bbls. of white gasoline which followed lost only 200 bbls. to slop.



Arkansas Fuel Oil Co.'s Bossier City refinery, the initial terminal of the 8-inch line formerly used for crude transportation but now being used for moving both gasoline and kerosene

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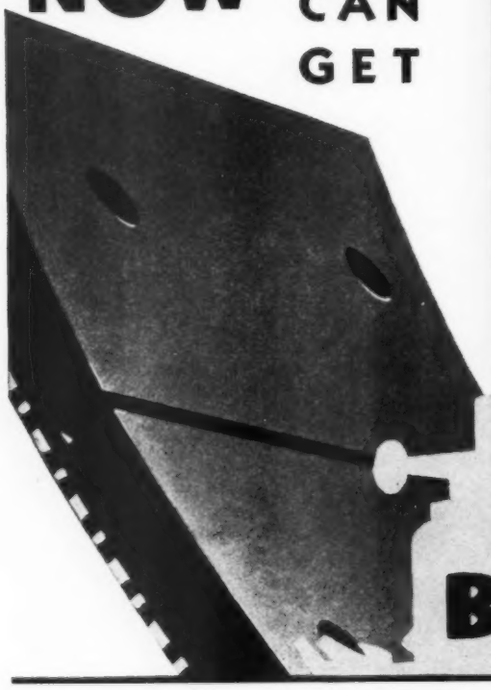

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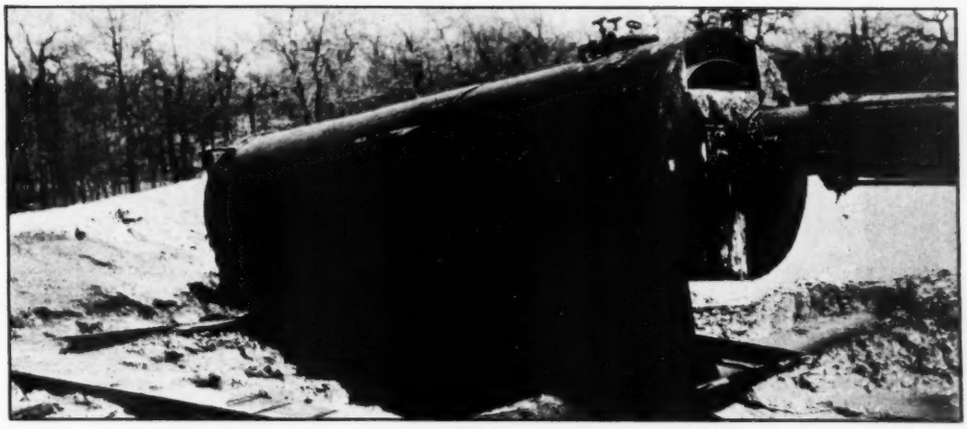
OPERATING IDEAS

Platforms for Lowlands

At one gas well located in the lowlands of the Monroe gas field an oil company has erected the elevated platform shown in the accompanying photograph. High water often completely covers the wells in this field, thus causing the lease man to travel from well platform to well platform in a small boat. The towers are constructed from old used pipe, cross-braced with rods welded to the uprights.



Weight of Drilling Mud Used to Revolve Shaker

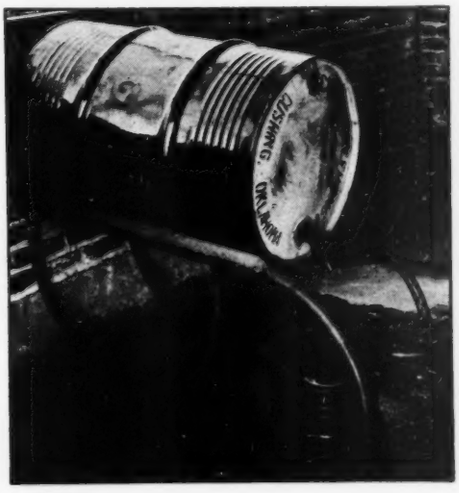
The shale-shaker shown here is used by an Oklahoma operator, and consists essentially of a drum, a rotating cylindrical screen mounted inside the drum and a paddle-wheel driving mechanism which rotates the screen. The inlet for the mud is so located as to cause the fluid to impinge against the paddle-wheel blades. The drum is mounted at an incline and as the screen revolves the clean mud passes through the screen and is continuously withdrawn from the base of the drum. The large solid particles move down the cylinder and collect in a pit.

Rack for Oil Drums

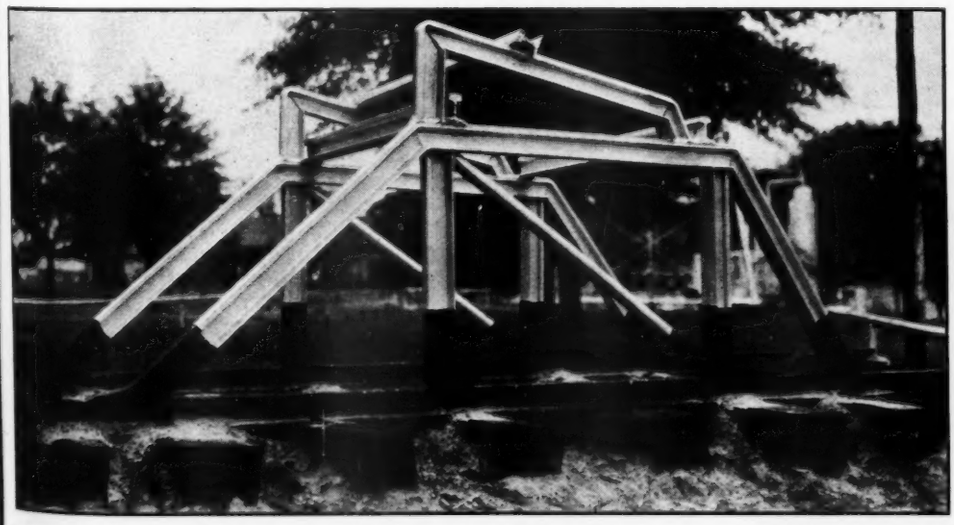
For the sake of convenience at a drilling rig, one California company uses a welded rack to hold oil drums. The drums are easily tilted, which eliminates the wastes which often take place when it is necessary to pour oil from a large drum into a small container.

Convenient Barrel Rack

A company operating a refinery at Cushing, Okla., has designed and made from reclaimed pipe a convenient barrel rack which enables one man to handle a barrel of oil with ease. The barrel is skidded upon the rack and due to the slight forward slope of the rack all of the oil will flow to the spigot so that it is not necessary to move the barrel after it is once placed in position on the rack.

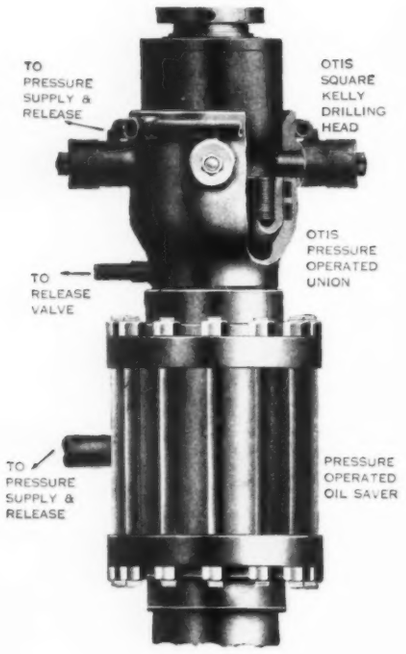


Bumping Post Constructed from Discarded Rails



The accompanying photograph illustrates one use that can be made of old discarded steel rails and tubing; namely, the construction of a bumping post at the end of a loading rack in a natural gasoline plant. This structure is welded throughout, thus forming a firm, substantial bumping post for blocking the tankcars after they are "spotted" on the loading rack.

NO MORE TRIPS TO THE CELLAR *while drilling in*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Modern Solvent Refining Theories and Practices

By JOHN W. POOLE
Petroleum Chemist, New York City

Beginning with the fundamentals of solvent extraction, Mr. Poole presents a comprehensive discussion of theories and of practices used in the process. The object of this article, and of others to appear in subsequent issues, is to set forth the controlling principles and the physico-chemical mechanisms involved, and to provide a better understanding of the limitations and potentialities of the art.

If two liquids are mixed together, it may be found that they become perfectly blended to form a single homogeneous liquid. This is what happens when gasoline and lubricating oil are mixed at room temperature.

On the other hand, it may be found, upon mixing, that one liquid will settle to the bottom and the other rise to the top of the container. Having two clear substances in glass, like gasoline and water, the level where one stops and the other begins can be clearly seen. The above two substances appear to be essentially uncontaminated each by the other.

The first case, that of complete miscibility has no value in the present discussion, other than that it is representative of inoperable and useless procedure:

If, having an oil to be refined, a solvent is added to it, no refining action is possible if only a single phase results.

The second case, that of essentially complete immiscibility, may in theory offer opportunity for refining action. Actually it too has as yet been found to have little practical significance other than to be representative of inoperable procedure; in that, if having an oil to be refined, and a solvent is added to it, no refining action is possible if neither substance dissolves the other.

When two liquids are mixed there is only one possible happening which provides expectancy of refining action. Each of the two liquids must "dissolve" to a limited but appreciable extent in the other, thereby to provide two separable phases; one which will consist predominantly of one of two substances, the other consisting predominantly of the remaining substance. Thus if the liquids behave in the same manner as do 50-50 mixtures of a paraffinic neutral and acetone at 60° F., some refining action can be brought about. To be sure, the system may or may not be suitable for commercial use, a matter dependent upon further restrictions.

The first two of the above three cases serve only to narrow the field to be considered, and need concern us no further. However, experience has shown that the universal inoperability which is characteristic of completely miscible systems should be stressed and always kept in mind. Having regard for those conditions under which this rule is most likely to be gotten it may be stated: No portion of an apparatus, occupied solely by a single phase, can effect, to any degree, a refining action.

The second inoperable case, although important, appears to be little likely to be overlooked.

If two liquids are mixed together and are found to be appreciably yet only partially miscible, they will of course—if mixed in certain proportions—form two separate and distinct phases.

Analysis of these phases will, as stated, usually reveal that one phase is composed predominantly of one liquid and that the other phase is composed predominantly of the other liquid. Nevertheless each phase will be found to contain amounts of both of the two original liquid components. In such cases as are of great importance to the present subject, the percentage of the predominate components will rarely be less than 80 per cent nor more than 98 per cent of either phase. Furthermore, if two phases do coexist and both liquid components are pure substances, with no chemical reactions involved, the composition of each phase will be constant for any temperature, regardless of the overall proportions of the two primary liquid components. On the other hand, the respective compositions will vary with temperature. Usually the concentration of the predominating component decreases in the respective phases as temperature is increased; in any event, as temperature rises the two phases tend to approach each other in composition. If the temperature is sufficiently increased the two phases will become identical, although their composition at or near this temperature will not necessarily approximate equal quantities of the two original liquids.

Critical Temperature

Above this temperature, sometimes called the "critical solution temperature" only one phase can exist regardless of the relative proportions of the two components.

To avoid possible criticism from those who choose to be scientifically exacting, it must be stated that possible exceptions can be made to a position of the above description. Nevertheless, as

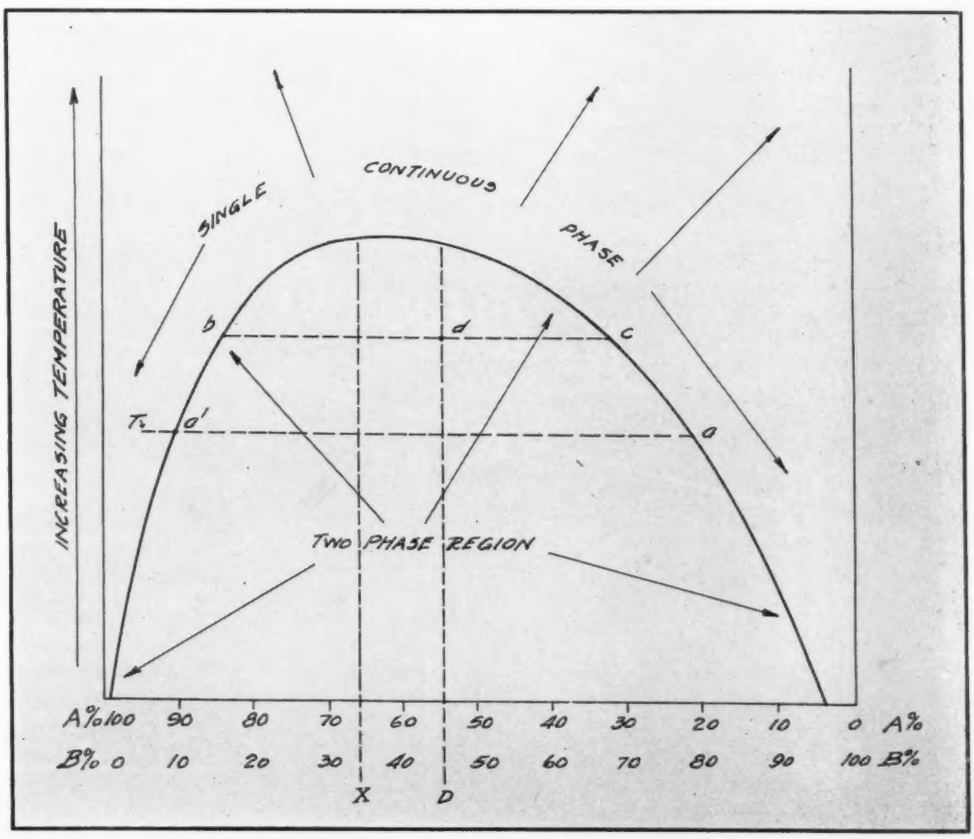

Fig. 1—Generalized phase diagram for hypothetical partially miscible liquids

No RESTRICTION of FLOW

The Through-Conduit opening sees to that

The THROUGH-CONDUIT opening of the W-K-M Gate Valve provides a smooth, unobstructed flow-way which prevents any accumulation of foreign matter. Thus is eliminated the age-old valve problem of sediment, scale, etc., collecting in the gate cavity to make tight closing impossible. Should any foreign matter collect in the Through Conduit of this valve while in a "cracked" position, it is merely carried down and held in the conduit while the valve is closed. Then, when the valve is again opened, it is flushed out.

Whether in an open or closed position, the seats of the W-K-M Valve are entirely sealed off, pressure tight.

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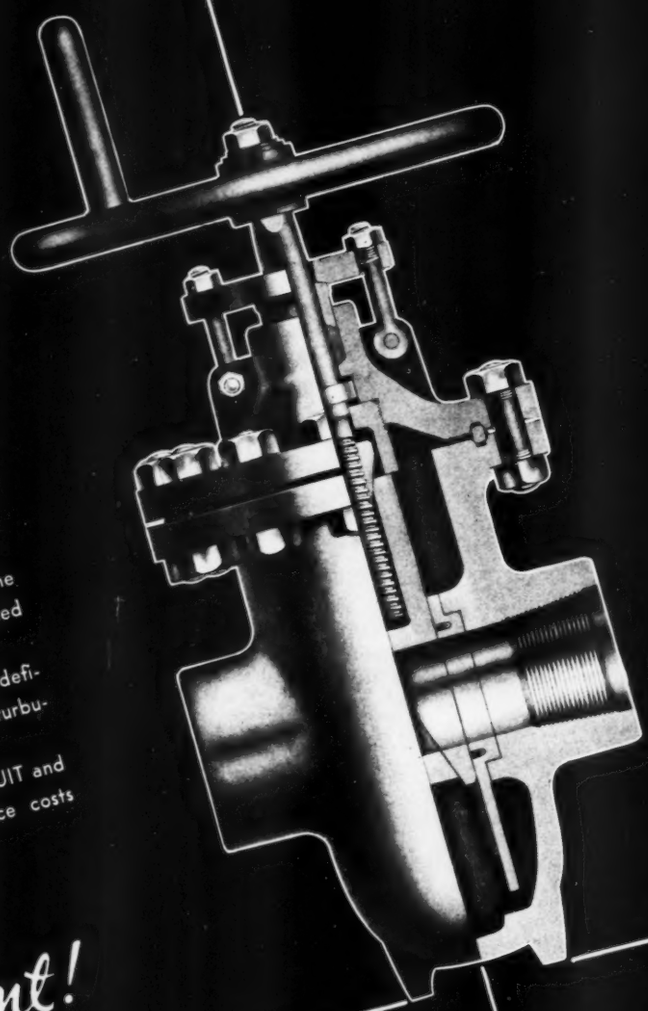

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far as the art of solvent extraction of lubricants is concerned, such exceptions may be considered as possessing negligible importance. To elaborate sufficiently to cover them all would needlessly increase the complexity of a discourse, which, due to its fundamental nature, must be given thorough treatment—at least to such extent as it relates to the present art.

Behavior of Typical Components

To allow the reader to more clearly visualize the basic two-phase system as it relates to petroleum refining, a purely hypothetical pair of liquids will be discussed "in extenso" covering all their probable variations both with respect to temperature and with respect to variation of their relative proportions. These hypothetical liquids will be respectively designated as "A" and "B." Diagrammatically their phase relationships are expressed by Figure 1.

Looking down on two chillers in Kendall Refining Co.'s propane dewaxing plant at Bradford, Pa.

In general, temperature permitting, the following sequence of events can take place: First "A" will be regarded as the "solvent" or substance in which another substance is to be dissolved. "B" will be regarded as solute, the material which is to be dissolved in, or dispersed throughout, the "solvent" "A." Such a choice is of course purely arbitrary. Either substance is capable of acting as either the dispersing or the dispersed material. It is also well to note that neither substance is solvent or solute in the sense employed in aqueous solutions of substances like table salt or sulfuric acid.

Determining Points

If "B" is slowly poured into "A," which is meanwhile well agitated to produce intimate contact, it will be found that for sometime "A" will remain clear and bright with no evidence of a second coexisting phase. Eventually, however, "A" will become "saturated" with "B," and the addition of further "B" will cause the solution to appear murky as an incipient second phase appears. Knowing the temperature, this establishes a point on Figure 1. If more "B" is added, there will be no further increase in the volume of the "A phase," but all additional "B" will go to increase the volume of the newly formed "B phase." Actually, as the magnitude of the second phase increases, there will be a decrease in the volume of the "A phase." The reason is hereafter evident.

If originally it had been decided to pour "A" into "B," instead of vice versa, the entire above description would have still been exact, provided only, that the terms "A" and "B" were substituted each for the other throughout, the only notable difference would be the composition of the solutions when they become murky. The result is that two points can be determined without changing temperature, each point denoting the beginning of a second phase. Such points when determined for a rising sequence of temperatures will establish two curves on the diagram, one on the left and one on the right. As the temperature increases the two curves tend to converge so that if the temperature becomes sufficiently great they will connect thereby to establish a continuous boundary line which encloses that spread of conditions under which two phases can exist simultaneously.

The above treatment is predicated on the assumption that pressure, for example atmospheric, remains essentially constant. For most liquids the effect of varying pressure has relatively little effect on the diagram. For those solvents—with the exception of liquid sulfur dioxide—at present used for extraction in the strict sense, increasing pressure up to 300 pounds per square inch appears to have little or no effect. In general, this may be expected for all cases where the compressibility (dv/dp) of the liquids is small. That which is most likely to disrupt or interrupt the phase diagram is the attainment of boiling temperatures; or expressing the same point in different form: The phase diagram cannot be completed if pressure, sufficient to prevent evaporation, is not mantained.

The above statements should not be regarded as applying to solutions which comprise propane. Under the conditions of normal use propane is not a "selective" solvent in the usual sense. Furthermore, the conditions of use may very well be such that the compressibility of propane cannot justly be considered "small." Propane and analogous solvents will be considered separately.

✦ ✦ ✦ ✦

Largest Diesel-Electric Rig on Coast Attracts Attention

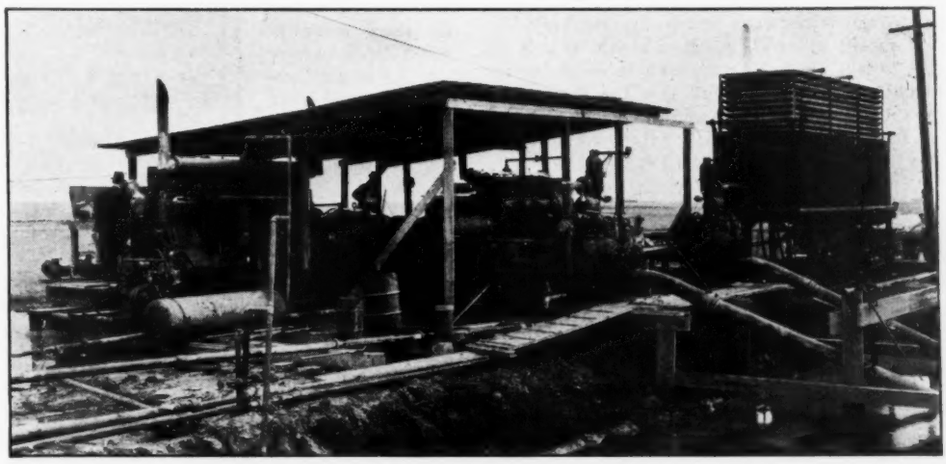
The largest diesel-electric rig ever used on the Gulf Coast is being successfully operated by R. B. Fields, contractor of Oklahoma City, who recently moved his rig to the south extension area of the Dickinson field in Galveston County for the Bennett-Kenyon Oil Co. This is the third location for the rig, formerly used in the Oklahoma City field where two 6,400-foot wells were completed without trouble. The outfit has been set up on the abandoned Galveston-Houston Electric Railway right of way and a total of 7,000 feet of hole has been drilled within 25 days. This includes rigging up and cementing 2,600 feet of 10¾-inch surface casing. This drilling time compares favorably with that made by steam rigs throughout the field.

While diesel power for drilling has been used in several instances along the Gulf Coast, the rigs have in most cases been located in remote places, several miles distance from fuel lines and where transportation and water supply was limited. Consequently the use of this outfit in a field which is the second largest gas reserve in the Gulf Coast and where excellent transportation and water supply is provided, has attracted wide attention and the progress of the well is being watched with much interest.

Power for the rig is supplied by two 275-hp. full-mechanical, injection-type diesel engines, driving a 350-vole generator at 1,200 r.p.m. The engines are arranged so that they can be used together or separately. It is also possible to place both the pumps and drawworks on one engine and generator. All equipment on the rig is using direct current. Each engine is composed of eight cylinders weighing 20,000 pounds and delivers its rated horsepower at 500 r.p.m.

The engine's pump and generator are composed of one unit and may be set up in any direction from the location. The unit at Dickinson is located 206 feet from the derrick and is set up on 60-pound, 12-inch H-beam wooden substructures,

The two slush pumps, 7¾ by 18 inches, are driven directly from the engines. A small 4 by 6 standby pump powered by a small gasoline engine has been set up and may be used if necessary while the drilling mud is being conditioned.



Set-up of large diesel-electric rig operating on an abandoned interurban right of way, Gillock field, Galveston County, Texas

Well-Shooting With Reference to Secondary Oil Recovery

By HARRY M. RYDER
Ryder-Scott Co., Bradford, Pa.*

The fundamental object of any oil-producing operation conducted for commercial advantage is neither to produce the greatest possible number of barrels, nor necessarily to keep the cost to the lowest amount per barrel, but to produce the greatest profit from the operation. In computing the actual amount of this profit, it is obvious that a dollar made the same year its development expense is incurred is worth more than if that dollar is made several years later, that is,

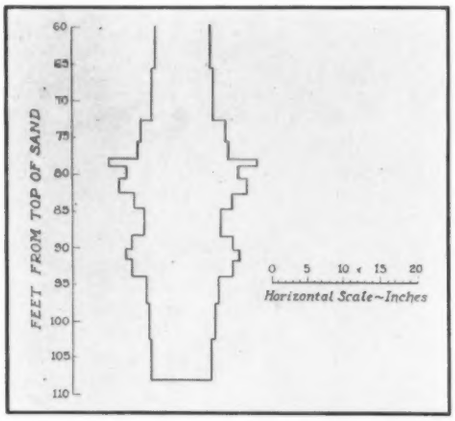


Fig. 1 — Profile of actual shot-hole showing mean diameters. Shot with 3½-inch shells from 25 feet to 109 feet in sand

except in so far as market prices may enter. This means, roughly, that every element in the development of a property must be done, not necessarily at the lowest cost, but in such a manner that it shall yield the greatest possible returns in terms of net dollars.

The necessity for shooting has been recognized for many years, and its practice in the Pennsylvania regions has been practically universal. Unfortunately, however, to figure a shot so that its results will yield the maximum in economic returns has been so difficult that the practice of semiblindly selecting size and placement of shells has been almost as universal as the shooting itself. The development of secondary recovery methods, with the closed spacing of wells, and important control of pressures, and consequent need of much greater control of shooting has not to any great degree lessened this seeming guesswork. The reason for this, as we well know, lies in the difficulty of observing the exact effects of a shot, either on the sand itself or on the resulting production.

It is never possible to tell what difference would have resulted had a shot been different, and sand and other conditions change so much from point to point that to make direct comparisons based on the performance of different shot wells has been of limited use. The widely varying shooting practices today more nearly coincide with the variations in the mental processes of the persons responsible than in the sand and operating variations the shooting is intended to assist and correct.

The purpose of a shot is to "get" more oil and to get it sooner. It can function solely through its ability to enlarge in the well the effective exposure of the pay sand face. It seems reasonable to suppose that the greater the violence of the explosion at any one point, the greater will be the effective enlargement at that point. The first question then becomes "What is the proper enlargement for the greatest economic benefit?" Notice the use of the word "economic."

Various views are taken as to the physical effect of the shot on the sand. There is usually some actual enlargement of the mean diameter of the hole itself opposite the shot. Evidence of this is found in the material removed from the well after a shot, both by it and during the subsequent cleaning out. The size of this hole is not so large, however, as has often been opined. Some years ago we made a rough survey of a shot hole to satisfy our curiosity on this point. A 6½-inch hole had been shot with 3½-inch shells. With the hole clean, a string was put on the sand line marking the bottom. Crushed limestone was then dropped in the well, a small known measureful at a time. After each measureful, the bailer was run and a new string put on the sand line. This was continued as far up the hole as we cared to go. The result, computed as mean well diameters, is shown in Figure 1. We do not believe that the hole is of a circular section, nor can these measurements be accurate, but the actual conditions in the shot hole must be much as shown. The point is that the hole is not very large, and that the actual increase in diameter is very erratic. This increase in size cannot account for the extent of the beneficial effects of shooting. There must be, therefore, radial fracturing far beyond the dimensional limits of the hole itself. We have much evidence to corroborate this belief. We have evidence, too, that these fractures are, at least in part, vertical. On several occasions we filled with cement without pressure the shot hole opposite some very permeable sand only to find the water, later introduced under pressure, by-passing the cement and proceeding on its untrammeled way through the permeable strata we had attempted to seal. Fractures too small for the cement to fill would seem to have been the only possible available passages into the "open" sand.

Yuster reports that Ranney, in his mining work, has found fractures emanating as far as 40 feet from the shot hole.

It seems logical to believe, therefore, that not only does fracturing occur, often far into the sand from the shot hole, but that the effectiveness of the shot is due in a large measure to this same fracturing. The increase of effective surface which may be exposed by a relatively small amount of fracturing is astounding. Incidentally, this viewpoint may well cause us to revise our accepted ideas of the extent of sand plugging in pressure wells due to a small amount of suspended matter in the water. Much wonder has been expressed that an old-fashioned ground flood, with its sediment-carrying water could ever work. We know that it often did, and here is a possible reason.

In discussing shot holes it is now necessary to use the term "effective diameter," meaning of course the diameter of a hole whose effect would

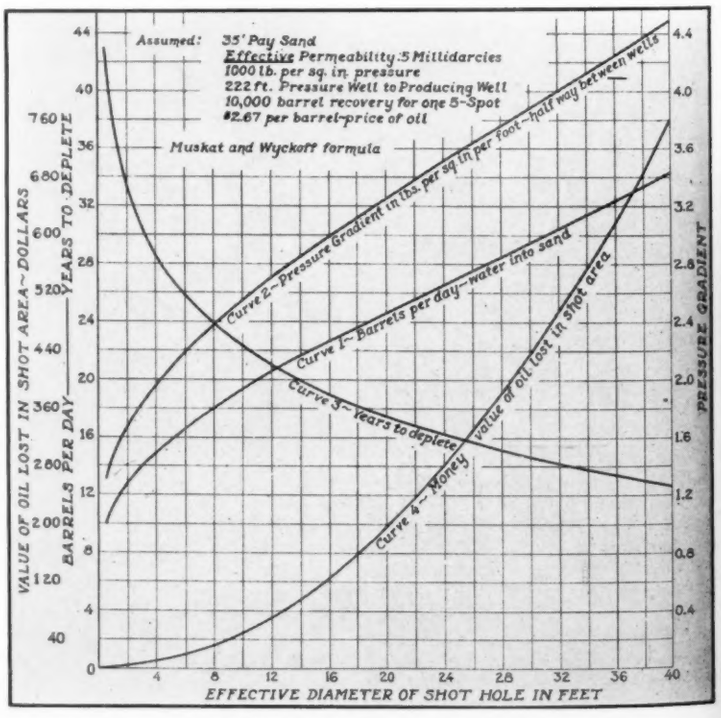

Assumed: 35' Pay Sand
Effective Permeability 5 Millidarcies
1000 lb. per sq. in. pressure
222 ft. Pressure Well to Producing Well
10,000 barrel recovery for one 5-Spot
$2.67 per barrel-price of oil
Muskat and Wyckoff formula
Curve 2—Pressure Gradient in lbs. per sq in per foot—half way between wells
Curve 1—Barrels per day—water into sand
Curve 3—Years to deplete
Value of oil lost in shot area
Curve 4—Money
VALUE OF OIL LOST IN SHOT AREA—DOLLARS
BARRELS PER DAY
YEARS TO DEPLETE
PRESSURE GRADIENT
EFFECTIVE DIAMETER OF SHOT HOLE IN FEET

Fig. 2—Effects of varying effective shot-hole sizes

*Presented before Seventh Pennsylvania Mineral Industries Conference, Petroleum and Natural Gas Section, April 30-May 1, held at Pennsylvania State College, State College, Pa.

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Don Weaver's letter tersely tells the whole story on Grant Reamers. The exact inclination of reamer cutters and the helical cut of the reamer cutters are not just a matter of pure theory but, instead, exactly track the only proven theory of straight hole drilling developed throughout all time. A close examination of the Grant Reamer and a comparison of this reamer—its cutters, the work which they perform and the manner in which that work is performed—with any machine tool drill or reaming tool will quickly demonstrate why Grant Reamers perform the function for which they are designed in the most efficient manner. The incorporation of specially designed and constructed roller bearings in the reamer cutter, bearing directly upon reamer cutter pins, is the direct answer to why Grant Reamer cutters do not run flat during any drilling operation. These bearings also explain the long life of Grant Reamer cutters, the almost total lack of any reamer pin wear, which pin wear is so frequently the direct cause of pin breakage and loss of pins and cutters in the hole.

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Very truly yours,

Donald K. Weaver
Donald K. Weaver
Field Manager

DKW:np

GRANT OIL TOOL CO.

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Photographs show Grant Reamer in actual usage on Bandini Oil Co.'s Kammerdiner No
two miles east of Brea, California. Above is shown Don Weaver, Field Manager of the Wils
Oil Co., who drilled this well. Below, the crew, reading from left to right: John Sm
Helper; Wm. Neely, *Chief Engineer of Construction;* Will Nichols, *Petroleum Engin*
Lee Coe, *Grant Oil Tool Co.;* Jay Hill, *Tool Pusher;* O. Hardcastle, *Derrick Man;* J. K. H
Helper; S. O. Newton, *Driller;* J. T. Ryan, *Helper.*

be equivalent to the irregularly fractured area a shot actually creates. In this sense we are not speaking wildly when we refer to effective diameter as great as 40 or 50 feet.

Oil is moved into producing wells, in secondary recovery operations only by the assisting movement of air, gas, or water. This energizing medium in turn moves only by virtue of an existing pressure gradient, or pressure drop along the line of flow. The width of this current of fluid passing from the pressure well to the producing well is necessarily small as it leaves the pressure well, widening to a maximum somewhere between the two wells, and narrowing again as it approaches the producing well. The forward progress in feet per day is therefore least at the point of maximum width of flow, and the pressure gradient, or pressure drop per foot traveled, is least at this point.

We shoot wells for the purpose of increasing this gradient and in this way to bring in more dollars and to bring them in sooner.

A very valuable paper by Muskat and Wyckoff* discloses a mathematical formula from which we deduce certain effects of shot holes of varying effective diameters. For a water-flooding five-spot, Yuster has reduced this formula to oil-country terms as follows:

$$Q = \frac{.00154\ k\ h\ \Delta P}{\eta(\log_{10} D/r_w - .269)}$$

where:

- Q = barrels per day water input in pressure well.
- k = sand effective permeability in millidarcies.
- h = sand thickness in feet.
- ΔP = intake pressure.
- η = viscosity of the water.
- D = distance center to center from pressure to producing wells.
- r_w = effective shot hole radius

Since a condition involving oil, water and gas in varying quantities is very complicated, this formula is based on water only in the sand. It would be far better to include the oil and gas, but just now we cannot, so we assume this condition as a sufficiently close approximation for our purpose.

Curve sheet Figure 2 indicates the effects of varying shot-hole effective diameters. In computing this, a five-spot pattern, 314 feet between pressure wells, has been considered, with 35 feet of pay sand of about .5 millidarcies effective permeability (possibly 5 millidarcies dry permeability), and 1,000 pounds per square inch pressure at the intake well sand surface. The center to center distance from pressure well to producing well is 222 feet.

In this case, ignoring any mudding up of the pressure well due to drilling, the unshot 6½-inch hole will take 10 bbls. of water a day. As we see from the curve, the amount of water the well will take increases rapidly as the effective shot-hole size increases, until with a 40-foot diameter effective shot hole the well takes almost three and one-half times as much water as the unshot well. As shall be shown presently, these figures are in the order of actual accomplishments in the field. In fact, they are so close to the actual experience as to lend a very strong argument to the theory of rather large effective shot-hole diameters. This change in water flow necessarily affects the pressure gradient in the large territory central between the pressure and producing wells. Curve 2, Figure 2, will give an idea of just what happens to this gradient at the point midway between adjacent wells. From an unshot well gradient of about 1.3 pounds per square inch per foot, the gradient increases to 4.5 pounds where the effective shot-hole diameter is 40 feet.

Where other conditions are constant, this gradient will vary directly with the applied pressure, so that it might well be 9 pounds per square inch per foot where the pressure applied at the sand face is 2,000 pounds, not an uncommon pressure in the Bradford field. It is interesting to note that this pressure gradient is within hitting distance of the gradients found in the State College laboratory to bring about the greatest practical oil recovery. We have, therefore, by shooting these wells met one of the conditions for best operation.

The other is the time factor. According to one able Bradford producer, it is practicable to allow a producing well, during its life, to pump 10 times as much water as oil. In the five-spot here considered, the well should produce approximately 10,000 bbls. of oil during its life. It may, therefore, produce 100,000 bbls. of water. All this water must enter the intake wells, and in addition, enough must enter to fill probably 75 per cent of the effective pore space. The total amount of water which must enter this five-spot pattern will then be approximately 155,000 bbls. during its life, one-fourth representing one-quarter of the total input of the four corner wells.

At the rate of 10 bbls. a day, for the unshot well, this would require about 43 years, an impossible time. At the rate computed where the shot hole has an effective diameter of 40 feet, the time would be about 12½ years, not far from a common condition. If the effective shot-hole diameter were further increased or if the permeability were greater the time for depletion would be correspondingly decreased, and it often is. The fact that in practice the amount of water entering a well does not remain constant does not invalidate this argument. These figures can readily be adjusted to any actual condition a producer may experience. The shape of the curve and the order of magnitude will not appreciably change.

And now a contrary circumstance enters. Where an effective shot hole is 40 feet in diameter, there must be actual fractures radiating more than 20 feet from the center of the hole. What happens to the oil originally in the part of the hole actually cleared of sand is easy to figure, and does not amount to much. Just what happens to the oil in the remaining part of the effective shot-hole territory, that part in which the sand remains in place, but is within the fractured area, is open to conjecture. It moves with too great difficulty for much of it to be forced beyond this region by the shot. The water likely gets behind some of it and shoves it on, but much of it may well be trapped by water entering the sand body near the outer edge of the fractures. Oil is moved against water with so great difficulty that it is wholly improbable in this case that any appreciable amount of oil, once it is behind water, is ever forced into the producing well.

An assumption has been made, therefore, that all oil within the effective shot-hole diameter is permanently lost. As there is no present verifying evidence for this assumption, it must be taken for what it may be worth. On this basis, the amount of money represented by this "lost" oil has been computed on the current market of $2.67 a barrel.

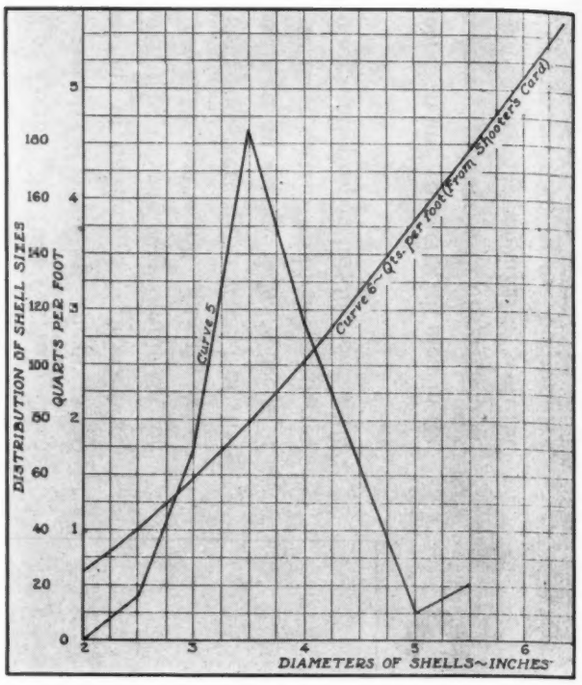

Fig. 3—Diameters of shells as selected by producers for 100 shots

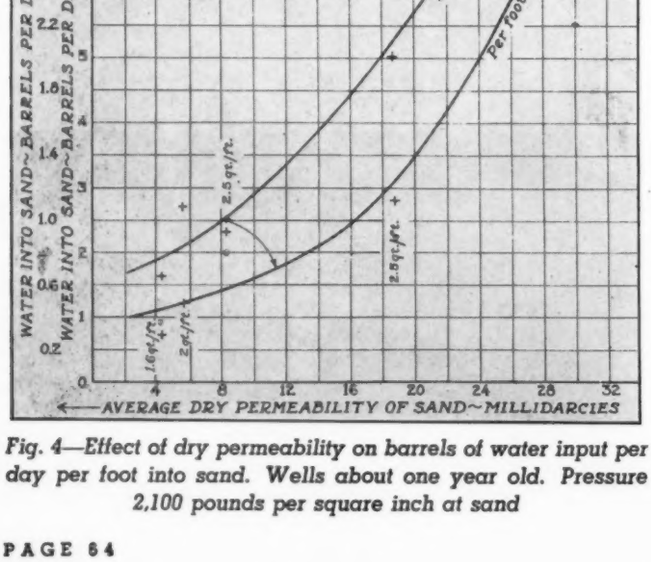
WATER INTO SAND~BARRELS PER DAY PER FOOT OF SAND
WATER INTO SAND~BARRELS PER DAY PER FOOT OF SHOT
Per foot of sand
Per foot of shot
AVERAGE DRY PERMEABILITY OF SAND~MILLIDARCIES

Fig. 4—Effect of dry permeability on barrels of water input per day per foot into sand. Wells about one year old. Pressure 2,100 pounds per square inch at sand

*A.I.M.M.E. Technical Publication No. 507, 1933.

and with a recovery factor of 5,000 bbls. per acre. The rather startling results are shown in Curve 4, Figure 2. Our 40-foot effective shot hole, which has treated us so well in terms of time and quantity of oil, is now costing us over $750 in lost oil for each five-spot pattern, if our assumptions are reasonable! Even though we lose only half the oil, the amount we pay the shooter becomes only a part of the cost of the luxury of our shot holes.

Here also is a clue as to why close well spacing may result, and has resulted, in an actual decrease in the recovery of oil per acre. The proper effective size for a shot hole for best economic operation becomes a balance to be worked out for each individual case. The means are here presented. No generalized result can be of any value.

If, in view of all this, a curve could be plotted between quarts of nitroglycerin per foot of hole and effective shot hole diameter, the story would here be complete. This, as must be manifest, is unfortunately impossible. Again many factors enter. Aside from the presence and nature of liquid which may be in the hole, amount and type of tamping, detonation rate of the nitroglycerin, and conditions of this type which presumably may be under control, we have the varying physical characteristics of the sand itself, compressive strength, elasticity, etc., often the presence of shale or mica stratification, varying amounts of liquid in the sand body, varying degrees of rigidity of the overburden, and other conditions which are to a considerable extent unknown, and all of which have considerable effect on the extent of fracturing. And, as if this were not enough, we cannot go down and see what happened.

Our only hope of tying these factors together lies in an extended analysis of a large number, perhaps thousands, of actual shots under varying conditions with the hope that from it may come a reasonable rule from which good average results might be expected. It is unfortunately beyond the possibility of this paper to report on any such analysis.

A birdseye view of current shooting practice, so far as strength of shots is concerned, can perhaps best be shown in the form of the curves in Figure 3. A large glycerin company serving many of the best accounts has been kind enough to furnish a list of the quantities of the various diameters of shells used in approximately 100 shots selected at random. Four hundred and seventy-nine 20-quart shells are included. Curve 5 indicates the choices of shell diameters made by the producers. It is interesting that the information furnished directly by the producers fits this distribution of shell sizes very well. Far more 3½-inch diameter shells are used than any other one size, and the 3½-inch and 4-inch shells together constitute about two-thirds of the total. To make the curve of greatest value, 4½-inch shells have been included with the 4½-inch size and 4¾-inch have been combined with the 5-inch. The upturn of the curve for the 5½-inch size is interesting and represents the practice of an important minority of prominent operators. As the intensity of the explosive force may best be expressed in terms of quarts of nitroglycerin per linear foot of hole, Curve 6 has been included. The data for this have been taken from the shell size charts furnished by the glycerin companies, and includes end corrections for the shells themselves. Please do not try to check it on a strict volume basis.

Most producers shoot 2 to 2½ quarts of nitroglycerin per foot. Some shoot as low as 1 quart, some as high as 4½ quarts—all this in the Bradford sand. Again, this selection cannot be attributed primarily to the varying sand conditions so much as to varying ideas of individuals. Neighboring properties where sand conditions do not vary greatly are frequently shot quite differently.

Although we are fundamentally interested in what comes from the producing wells, the amount of water entering the pressure wells is just as important. Since it is far easier to study the effects of shooting on the performance of intake wells,

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we shall confine this portion of the study to such. Let us consider this condition and to what extent it is being met in actual cases, and in particular, the effect of shooting in this regard.

Where 35 feet of pay sand is to be found, it is very important that pressure wells average 50 bbls. to 75 bbls. or more of water daily for the first year if the flooding time is not to be extended unduly, and if efficient pressure gradients are to be maintained. Under certain circumstances much greater rates might be desirable.

Four pressure wells were not shot, but completed as the drill left them. These averaged 10.5 bbls. of water a day when first turned on, varying individually from 9 to 14.5 bbls. One of these, over an extended period of time averaged less than 1 bbl. a day. Two of the others shot two years later 2 quarts per foot averaged 33 bbls. a day just after shooting without surface pressure, and more than seven years later averaged 35 bbls. a day under pressure. We must shoot. But how must we shoot, in order to obtain the desired results?

Results of Shooting

In one case on our own property we shot pressure wells in rather uniform sand, some with 2½-inch, some with 3-inch, and some with 3½-inch shells. After six months these wells averaged 11 bbls. a day, 22 bbls. a day, and 47 bbls. a day, respectively. Another operator also in reasonably uniform sand shot pressure wells, some with 40-quart, some with 60-quart and some with 80-quart shots. He reports that the wells shot with 60 quarts took almost twice as much water as those shot with 40 quarts, and the wells shot with 80 quarts took about 2½ times as much. In another part of the field, adjacent pressure wells were shot, one with 40 quarts and the other with 80 quarts. After a year the latter well takes three times as much water as the former, about 35 bbls. a day in 20 feet of sand. The 80-quart shot was in 5½-inch shells. Another operator using 3-inch and 3½-inch shells states that his pressure wells take about 1 bbl. of water a day per foot of sand after a year. Two other operators, producing rather generally all over the Bradford field use 3½-inch and 3-inch to 4-inch shells, respectively, wherever possible. The first few months' average in these cases is reported as 90 bbls. a day and 66 bbls. a day.

In another case, this time in the Richberg territory, a well was first drilled through the upper, relatively permeable sand and not shot. After six months it took not much over 200 bbls. of water a day. Later, it was drilled through the lower sand, of much lower permeability, and the lower sand shot 2½ quarts per foot. Six months later the two sands were taking more than 50 bbls. a day.

On a Bradford field property, a well with 28 feet of sand was shot with 4½-inch shells and after a year was taking 26 bbls. a day. One location away, a well with about 20 feet of sand, shot with 5-inch shells, was taking 54 bbls. a day after a year. About 1,200 feet from these, a third well with 20 feet of sand, shot with 5-inch shells, was taking, after a year, 128 bbls. a day, all of the above under the same pressure. This latter well is in a region of much higher permeability than the other two. Since, under otherwise similar conditions, the amount of water a well will take is proportional to its permeability, properly to space, shoot and apply pressure to a well, this factor must be known. If it had been so desired, it is probable that the situation here might have been made much more uniform in operation had corrective shooting been practiced.

We were fortunate in being able to obtain from one producer the information necessary to enable us to plot the curves shown in Figure 4, offering direct evidence of the effect of permeability on the amount of water a well will take. These data were obtained on properties in the Bradford field which, as the permeability figures indicate, include quite a wide variation in sand conditions. It seems remarkable that the points should fall as closely to a smooth curve as they do. The curves indicate that above 10 millidarcies, dry permeability, the water flow will increase somewhat more rapidly than the permeability increases. Below that figure the variation in water flow will be somewhat less than the variation in permeability, a condition which probably makes it possible for us profitably to operate very low permeability sands.

Another operator has generously furnished data from which it seems actually possible to form an idea of the relationship between the strength of shots and the resulting water flow, other conditions again being fairly constant. This, again, happens to be Richberg sand. In Figure 5 is plotted the result of this analysis. While the variation from the mean is greater than might be desired, there is a very definite trend shown of this relationship. Viewpoints may reasonably vary as to just how to draw in the curve, but the one as shown seems to be as good as any. Please notice that this curve indicates, within the limits shown, that the flow of water is in almost exact proportion to the strength of the shot. If this law should hold generally true, it would be of very great value in planning a flooding program. An effort to plot a similar curve for the Bradford field resulted in a shot gun pattern through which no curve could possibly be drawn, this owing, we believe, to the variable permeability conditions involved.

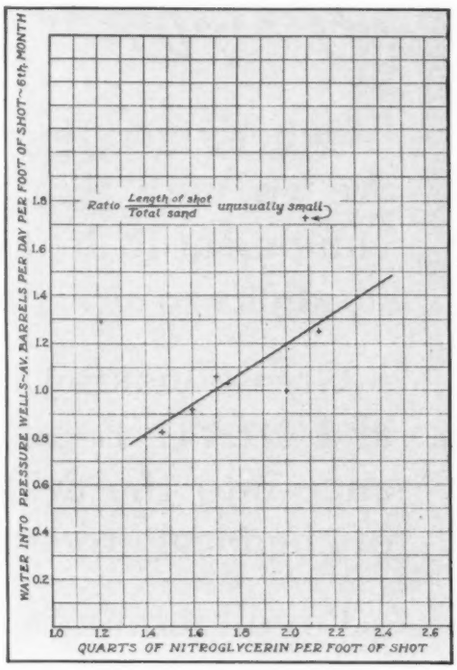

Fig. 5 — Effect of strength of shot on water forced into sand. Various sizes of shells. Permeability not known

Radial Fracturing

In the shooting of wells, it seems obvious that we are interested in developing radial fracturing rather than clear volume in the shot hole proper. We are told that rapid combustion of the explosive will tend to produce the opposite effect, and that if the rate of combustion is somewhat lowered, greater radial fracturing and less caving will result. This rate is, fortunately, to some extent under the control of the nitroglycerin maker.

It seems worth while to record here a comparison test made by an operator in the Bradford field, between ordinary nitroglycerin and solidified. Two wells were shot with each. Where liquid glycerin was used, neither well caved. Where solidified was used each well required six days to clean out. On the other hand, the average barrels of water taken per day per foot of sand for the liquid glycerin shot wells for the first month was 2.14 as compared with 1.55 bbls. for the solidified shot wells. Obviously, in this case the cleaning-out time is no measure of the effectiveness of the shot.

Sand tamping is being advocated as a means of increasing the effectiveness of a given shot, or of decreasing the amount of nitroglycerin necessary for a given effect. Much evidence from a number of fields has been presented to support this viewpoint. In the Bradford field, little sand tamping has been done to date. The cost of the time bombs and sand, and the extra work involved cause most of us to want to be shown. An operator in the Clarendon field is satisfied from his own experience that sand tamping, even with less nitroglycerin, has approximately trebled his production rate. We have tried a few sand tamped shots, but the indications, while definitely favorable, are too meager at this time to attempt conclusions. We feel they are worth investigating further.

Sand Crushing Strength

Since the favorable result of the shooting of wells is obtained by virtue of the sand fracturing produced, it seems reasonable that a knowledge of the crushing strength of sand and its variations from point to point would be of value in any study of shooting. In an effort to contribute some preliminary knowledge along this line, the State College laboratories kindly made some crushing strength tests on core pieces of sand of widely varying permeabilities, but otherwise apparently similar. The crushing strength varied from 10,200 pounds per square inch to 14,800 pounds, but showed no relation whatever between strength and permeability.

The status of our knowledge of sand, repressuring phenomena, and shooting has arrived at the point where we can specifically cash in on this knowledge. It is definitely known that the water a pressure well will take is proportional to its effective permeability, and roughly to its dry permeability. It is indicated, too, that for any given sand the amount of water a well will take is roughly proportional to the strength of the shot as measured in quarts of nitroglycerin per foot. We all desire to have a flood front move forward as nearly vertically from top to bottom of the sand as possible, for in this way is the most oil produced per unit of driving fluid used.

If, then, we were to adjust the strength of the shot from point to point through the sand within practical limits, making it inversely proportional to the permeability at each point, we should in some measure bring our flood front toward the vertical position. Here, of course, the possible variation in the susceptibility of the sand to fracture under a given shock should be considered—another job for State College. But even so, we can do a lot to correct, by wise shooting, the tendency of the flood front to become irregular. And it is being done. This may, it is true, cause a slowing up to some extent of the flood movement through the more permeable sand, but this is the price we pay for the later saving of driving fluid in and out of the wells without moving oil.

In the foregoing, an attempt has been made to show that with sufficient information and study, it should be possible for the art of shooting to approach much more nearly to being an exact science, and, therefore, to serve the producer far more efficiently than is now usually possible. The fact that we cannot see the shot hole does not seem to be a valid reason why we should not be able to predetermine the desired result and then be able to specify the shot necessary.

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QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Terry and Field Method for Smoke Test of Kerosene

Can you give me, or refer me to a reference, a description of the Terry and Field Smoke Test which is recommended for the inspection of kerosene?—H. N. S.

The constitution of any kerosene is closely related to its tendency to smoke in a given lamp. The Davis lamp, originally designed for measuring the light of a kerosene flame, has been improved by Terry and Field for determining smoke point of the flame. The modified lamp, fully described in the reference, is charged with the oil, within 0.5 inch of the top of the fount, the wick, 4 inches long, is placed in the burner and burned to a rounded top. The burner is then placed in the fount and the chimney set in place. A 3-inch flat bottomed porcelain dish, filled with cracked ice, is fitted above the chimney. The entire system is placed within a cabinet.

The lamp is lighted, the wick being adjusted to give a small flame for about 15 minutes, and the door of the cabinet being left open to permit the flame to stabilize itself. The zero mark on the scale is adjusted to coincide with the burner top. The cabinet door is then closed and the flame turned up slowly to a height where a smoke spot is formed on the bottom of the dish. The dish is then moved away from the chimney and the flame turned down one-half of one scale division. This procedure is continued until the maximum height of the flame is produced without a smoke spot forming on the dish. The final adjustment of the flame is made with an accuracy of one-half of one scale division, or 0.05 inch. This maximum height of the flame is read directly by means of the aluminum scale, and represents the quality of the oil with regard to smoke tendency.

A very highly refined kerosene will give a flame height of 3 inches or more, a well refined stock about 2 inches, and an inferior grade less than 1 inch.

Reference: Terry and Field, The Smoke Tendency of Refined Kerosene and Its Determination, Ind. Eng. Chem., Anal. Ed., 8, 293, 1936.

Decolorizing of Lubricating Oil by Filtering Through Fuller's Earth

Please give me some information concerning the methods and equipment for filtering lubricating oil through fuller's earth. Is this used solely as a decolorizing agent? Could you furnish a sieve analysis of the average run of fuller's earth?—W. J. M.

There are three methods making use of fuller's earth for decolorizing lubricating oil. Percolation, contact followed by filtration through a press-filter and filtration in the vapor phase. All of these require the same type of equipment for handling and storing of the earth, also the oil storage does not vary.

The raw earth is shipped in bulk or in bags. The material is transferred from the cars or boats by means of belt conveyers to storage bins. The new earth, usually called clay at the refineries, is first dehydrated by heating in a rotary dryer or suitable kiln and then run into the filter, which is a vertical tank, with suitable openings and connections for charging with the clay, transporting the oil to and away, and steam pipes for heating and steaming. These filter tanks are of various sizes but seldom exceed 20 tons earth capacity. After filling the filter with earth the oil is permitted to run in and pass through until the filtered oil reaches some selected color.

The contact method makes use of a special clay, acid treated, which has been pulverized to pass a 200-mesh sieve. The oil is agitated with the earth in an enclosed tank at a relatively high temperature in the presence of sulfuric acid. Air must be excluded. After draining off any acid sludge, the oil, with some clay, is run to a press filter, from which the clarified oil flows to storage.

Filtering of lubricating oil in the vapor phase is not widely practiced. The vapors from the still are directed through a chamber packed with fuller's earth. Removal of wax and other impurities requires treatment with chemicals. Some fuller's earth is used for the removal of gum-forming compounds and the reduction of the sulfur content of gasoline stocks by filtering in the vapor phase. Fuller's earth is marketed in several grades, the finest is ground to pass a 200 sieve. The grade used by many refiners is the 30-60 grade.

A 30-60 fuller's earth when tested on standard screens gave the results shown in the table:

SCREEN TEST 30/60 FULLER'S EARTH

Screen—	Per cent
Coarser than 20	0 11
20-30	2 26
30-40	51 59
40-50	30 65
50-60	2 79
60-80	9 46
80-100	0 56
Finer than 100	1 05

Fuller's earth may vary from 30 to 65 pounds per cubic foot, the lightest, from the Florida-Georgia deposits, weighs 30 to 40 pounds per cubic foot.

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Calcium Hypochlorite

Use—Sweetening, deodorizer, disinfectant, water treatment, preparation lubricating oils and greases.

Form—White or grayish powder.

Formula—$Ca(OCl)_2H_2O$.

Molecular weight—215.

LIMITATIONS

Grade A

Available chlorine, min. % 62

Note: The material described is also known as "high test hypochlorite." This product is more stable and contains about twice as much available chlorine as "bleaching powder."

Reference: Federal Standard Stock Catalog, Bleaching-Material, O-B-441.

Mercaptans and Reversion of Sweet Products in Storage

How much mercaptan sulfur in gasoline can be detected by doctor test? What is the relation of mercaptans to total sulfur? Is it possible to treat out mercaptans from crude and natural gas before extracting gasoline? What causes sweet gasoline to become sour in storage?—E. F.

The doctor test is simply a qualitative test for mercaptans; just how delicate the test may be has not been determined; however, the quantity must be very small, certainly much less than 0.01 per cent. Mercaptans do not appear to exist as such in crude oil but are thought to appear only in the distillates as decomposition products from sulfur compounds contained in crude oil. They are usually found in natural gasolines because of the heat that the gas has been subjected to when compressing or the still temperatures.

The mercaptans cannot be present in large quantities in the lighter distillates for several reasons. The total sulfur in crude oil is seldom more than a fraction of 1 per cent with only a small part appearing in the gasoline. Any mercaptans produced must be of the lower groups because of the boiling points; methyl mercaptan at 45° F., ethyl mercaptan at 95° F., propyl mercaptan at 154° F., and butyl mercaptan at 208° F.

The main purpose of the doctor treatment is the removal of objectionable odors. The quantity of sulfur is not reduced except in those rare instances when free sulfur is present. Elementary sulfur is necessary for the completion of the reaction, so if it is contained in the oil it would in part be changed to sulfides, etc., upon the addition of the plumbite solution. In doctor sweetening the sulfur should always be added ahead of sodium plumbite. The addition of excess sulfur is a rather common fault when treating. This sulfur in solution may be slowly converted to acid which will act on the sulfides, etc., to set free additional sulfur. The fact that the fundamental reaction is reversible contributes to the reduction of the disulfides to mercaptans. The several disulfides and sulfates, which are frequently retained in a sweetened product, slowly decompose, causing color darkening, the formation of acid-like compounds, mercaptans and gums. These all contribute to cause a sweetened gasoline to become sour while standing in storage.

It should be noted that the mercaptans alone are not corrosive but may be when free sulfur is present. The doctor test gives no indication of corrosive materials. The copper strip test or mercury will give a much more reliable indication of corrosive sulfur than the doctor test.

Heat of Caustic Soda Solution

What is the cause for the rise in temperature when dissolving caustic in water to make a 20° solution? What is the final temperature for such a solution?—D. F. L.

The heat produced when solid sodium hydroxide is dissolved in water is due to the combination of the sodium hydroxide and water to form hydrates. Most chemical reactions cause the evolution of heat and are said to be exothermic. A 20° solution should cause a temperature rise to 168° F.

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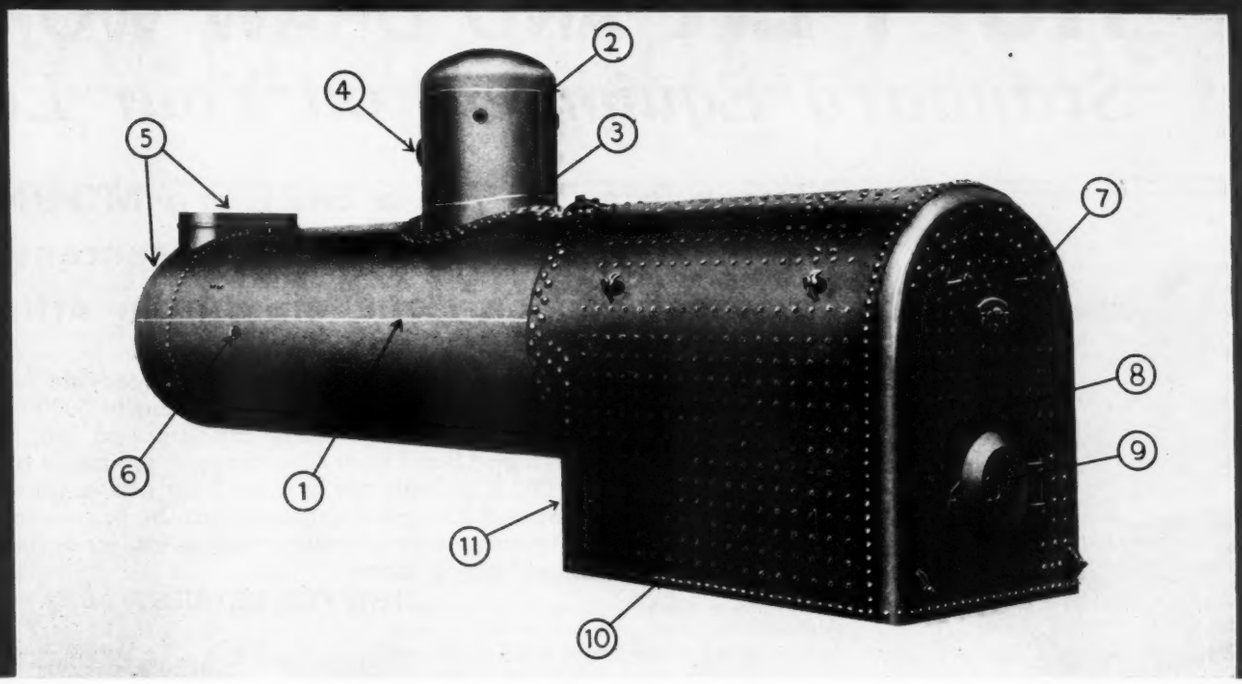

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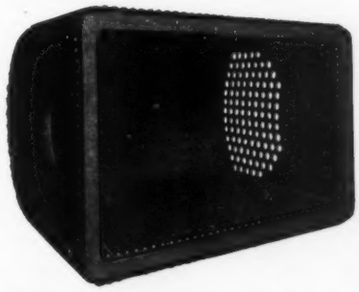

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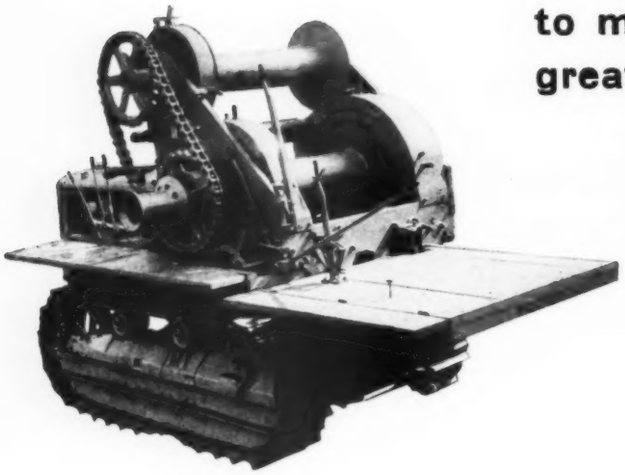

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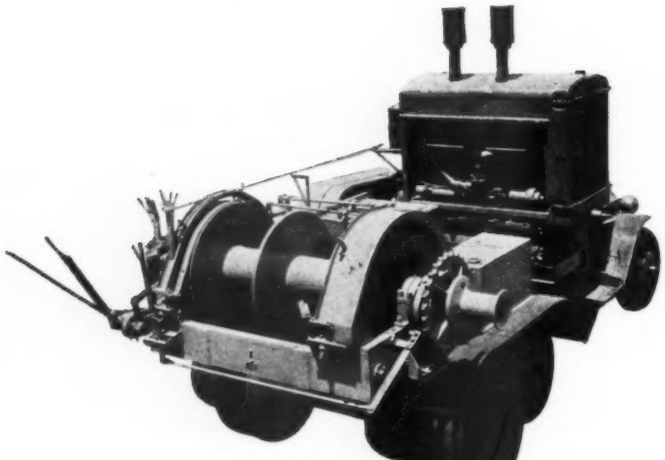

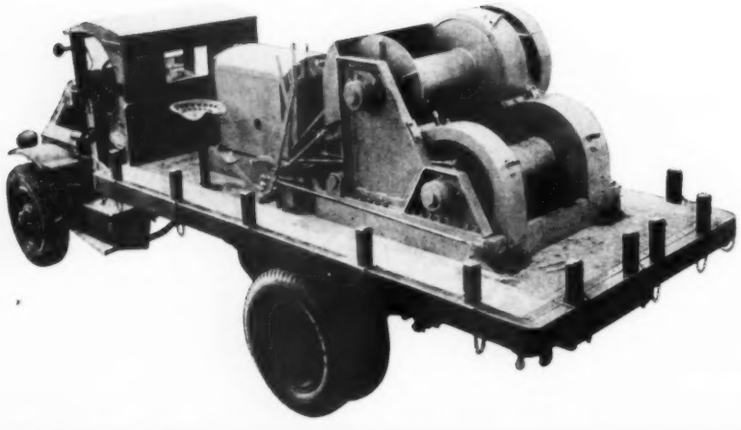

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PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Mining Oil Sands

We have noted a recent report of the mining of so-called "hard petroleum" in Alberta, Canada. The report states the oil is too viscous to flow but can be squeezed from the sand after the sand has been ground or pulverized. We are interested to know whether you have any report of such a deposit and if so what you know of its workability. Would the extraction of oil under these "mining" conditions be practical?—R. C. H.

While your description of the oil mining process is not very clear it is recognized and we refer you to the following articles regarding the Athabaska oil sands which have appeared in The Oil and Gas Journal recently.

In the issue of September 27, 1934, on page 33 there is an article by Gaylord Warren which gives a good deal of information about the geology and occurrence of these oil sands. K. A. Clark has also given general information on this subject in an article published in the October 31, 1935, issue on page 28. The milling process is described in some detail in an article by L. G. E. Bignell in the December 17, 1936, issue on page 37.

If you will read these articles you will have a fair idea of the mining and treating methods applied to the recovery of crude oil from these sands. Briefly described the process consists of open cut mining of the oil sands from the face of the deposits. This sand is then transported to the mill where it is washed in a pug mill and then delivered to a quiet cell flotation unit where the film of oil is washed off each grain of sand. This oil floats on the surface of the water and is collected. A light oil is added to thin the oil and the small quantity of sand carried over from the flotation cell drops out so the pipe line oil to the refinery contains a very small percentage of foreign matter.

This process should show a profit because it has been estimated it will cost about 35 cents per barrel delivered to the refinery. The finished products consist of gasoline, kerosene, diesel fuel, road oil and fuel oil. There is a market for these products in the immediate vicinity of the property at the various mining operations of northern Canada.

Pipe Line Mileage

Do you have figures showing the intrastate and interstate mileage of oil, gas and gasoline pipe lines in this country?—S. D. B.

In the December 31, 1935, report of the Interstate Commerce Commission it is shown that the total mileage of 53 companies coming under the jurisdiction of the commission is 92,037 of which total 39,380 miles are gathering lines and 52,657 miles main trunk lines. This is all interstate but it is stated in the report that it has been estimated that about 80.82 per cent of all pipe lines are subject to federal regulations and therefore make reports to the I.C.C. If this figure is right then there is about 21,463 miles of intrastate pipe line and a total of about 113,500 miles of pipe line in this country handling oil.

From data furnished The Oil and Gas Journal there were about 81,789 miles of gas lines in this country at the end of 1936. This mileage has not been broken down either into interstate and intrastate lines nor gathering, distribution and trunk lines. It is probable about 90 per cent of all gas companies reported and the total gas pipe line mileage is therefore between 90,000 and 92,500 miles.

From the same data submitted for the 1936 pipe line edition of The Oil and Gas Journal it was found that there are 5,223 miles of gasoline pipe lines in this country varying in length from 2 miles to 1,518 miles for the Great Lakes Pipe Line system. This represents about 90 per cent of all gasoline lines so the total will be about 5,800 miles. Again these lines cannot be subdivided into intrastate and interstate.

Selection of Cable Tools or Rotary

For several years I have been in charge of drilling operations for a prospecting company in Australia and during that period have been directly responsible in introducing cable tools in some areas and rotary in others. Can you indicate a line of demarcation between the use of these two systems in the United States? If statistics are available showing the relative use of each system in your country they will help me prepare a statement for the directors of my company because I am spending company money and do not wish to err.—L. McK.

It is difficult to get accurate statistics on the number of wells drilled by each system. In 1936 there were 25,888 completions in this country as shown in the table prepared by James McIntyre and published on page 41 of the January 28, 1937, issue of The Oil and Gas Journal. An analysis of these completions by states and subdividing the areas roughly into cable tool and rotary territory indicates the cable tool completions totaled 10,848 wells or 42 per cent while the rotary completions totaled 15,040 wells.

In making this compilation it is definitely noted that the footage drilled by cable tool method is decidedly less than that drilled by rotary method. This is to be expected and on this same basis it will be shown the expenditures for rotary drilling were much in excess of the money spent for cable tool work.

The choice between cable tool and rotary methods depends largely upon the economic advantages of one over the other. For relatively shallow wells it is usually simpler to set up a portable cable tool outfit and drill the well because at the most two strings of casing are required—the surface string and the flow string. This would not be any less with a rotary drilled hole and the rotary outfit, being heavier, would require more time and expense to move in and out of location.

An exception to this general statement may be found in the use of portable rotary outfits capable of drilling 5- or 6-inch holes 3,000 feet. As these units are popularized they may further invade the cable tool territory but so long as there are so many light portable cable tool outfits available the change will be gradual.

Where the holes are deeper than 3,000 or 4,000 feet rotary outfits are usually used in this country. This is largely because of the necessity of setting several strings of pipe to shut off stratas carrying gas or water when cable tools are used. These strings may be later reclaimed but the cost of running them and then pulling them makes the rotary drilled hole cheaper.

As many of our newer fields are producing from depths below 5,000 feet and can be drilled more quickly with rotary outfits the tendency has been to use this method more and more and this will be true of the future fields. On the other hand there will be thousands of wells drilled in the older fields for repressuring and water-flooding where cable tools will continue to be selected for the work. This in a way accounts for the small difference shown in checking the wells drilled in 1936. Cable tools will also be used extensively for clean-out work in many fields and this will apply to some fields producing from formations found below 5,000 feet.

In deciding upon drilling method to be used on your exploratory wells in Australia there will be many factors to consider but your letter indicates you are conversant with all of them and it is hoped the information given will be of some assistance to you in preparing your reports and recommendations.

Small Dam Gives Trouble

I have a small lake on my property and leakage at the dam gives me trouble. I have had a dam built from cement and rocks but the water seeps under it, also through the side walls. This dam is built on a shale formation. Shall I dig the base deeper or not?—R. C. McW.

There is not much detail given in your question so it is not possible to make any definite calculations as to hydrostatic pressures developed on the upstream side of the dam. The horizontal pressure on a square foot at the bottom of the dam is equal to the distance of the bottom below water level. If H equals the height in feet, the pressure at the bottom of the dam will be $62.4 \times H$ and will be expressed in pounds per square inch.

This will give you some idea of the pressure exerted against the base of the dam and if the shale upon which this structure rests is soft the water will seep through and escape downstream. Even a small trickle will destroy the dam because relief is afforded to the water behind the dam and the flow will gradually increase in volume until most of the water escapes.

If the dam has to be rebuilt borings should be made to determine the position of bed rock. That is material in place and hard enough to support the weight of the structure and resist the hydrostatic pressure exerted by the impounded water. Shale is not a good material upon which to build the dam because it will soften in water and become mud and you certainly would not think of building a dam on mud.

If there is sufficient of the original dam left in place a repair job can be made by filling along the base of the structure on the upstream side with a well puddled clay. That is good clay mixed with water until it is a plastic material and will spread freely. Put plenty of this clay against the base of the dam and then fill in over this clay with good earth so that the fill gradually slopes from the top of the dam back to the bed of the stream on a gradient of 1 to 2½ or 1 to 3. This fill will pack and because of its shape will aid in keeping water from coming in direct contact with the base of the dam where it rests upon the shale. This should help as a repair measure but rebuilding the dam upon bed rock will prove a more effective remedy.

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FIELD OPERATIONS

Summarizing the Week's Developments

The Wilmington field of Los Angeles Basin is the most active area in California in new work and completions. New tests are being started at about the rate of three daily, with completions averaging one each day for the last two weeks. Several large wells were completed in the pool the past week, and 35 are scheduled for completion within the next month. Wells in the Santa Maria Valley field, heretofore shut in because of lack of pipe line facilities, have been put on commercial production for the first time since discovery of the pool.

WEST TEXAS

The Hockley County discovery well on the Slaughter ranch was reacidized and flowed 502 bbls. of oil in 24 hours. Many wildcat tests are due to be drilled in neighboring counties as a result of the Hockley and nearby Cochran County discoveries. A Crane County discovery well was completed as a 380-bbl. well. An Ordovician wildcat test is due to start in Jones County. Work has started at a wildcat on the east side of Upton County.

SOUTHWEST TEXAS

The outstanding strike of the week in Southwest Texas was at a wildcat in Nueces County, which may extend the Clara Driscoll field 2 miles northward. An outpost test near the old Stratton gas field, Nueces County, found oil in Frio sand and is due to revive drilling in that sector. A drilling boom is getting under way at the newly opened North Sweden pool, Laredo district. Mirando sand producing area in the Killam pool, Webb County, was extended.

OKLAHOMA

Another big producer was completed in the Moore pool, Cleveland County, and two good wells were completed in the Billings area, Noble County. Week's completions also included a large producer in the Logan County extension of the Lucien field, and a sizable well in the new Sporn area, Lincoln County.

KANSAS

Six large producers were completed in the Trapp field, Russell County. The Silica field, Rice County, had seven new wells, three with potentials exceeding 2,000 bbls.; and a 3,701-bbl. well was completed in the Lerado field, Reno County. Eighteen new wildcats were reported in 12 Kansas counties. The Corporation Commission set the May allowable at 187,100 bbls., an increase of 4,100 bbls. over April.

NEW MEXICO

A well with estimated production of 16,135 bbls. of oil daily was nearing completion at the southeast edge of the Hobbs field, Lea County. Twelve oil wells were completed in Lea County, including the state's deepest hole.

MICHIGAN

Largest new producer of the week in Michigan was a 1,465-bbl. well in the Buckeye-Gladwin field, Gladwin County. Seven Dundee sand producers were completed in Michigan areas, and seven completions were dry. Mud and heavy spring rains delayed completion of a score or more important tests, including some possible extensioners and a probable pool opener.

Completions and Production

(Week Ending May 1, 1937)

	Oil	Gas	Dry	Total	1937 total comp. to date	1936 total comp. to date
N. Y., Pa., W. Va.	14	22	4	40	1,202	1,014
Ohio	9	4	8	21	303	104
Indiana	0	1	1	2	40	57
Illinois	1	1	2	4	23	15
Michigan	7	0	7	14	271	237
Kentucky	4	1	0	5	42	68
Kansas	33	2	11	46	721	481
Oklahoma	47	2	14	63	912	752
Texas:						
North Central Texas	38	2	14	54	891	865
West Texas	42	0	3	45	816	429
Texas Panhandle	12	0	0	12	210	224
East Central Texas	7	0	3	10	212	76
East Texas	39	0	3	42	691	824
East Texas border	5	0	0	5	143	13
Gulf Coast Texas	26	2	5	33	442	348
Southwest Texas	56	5	24	85	1,104	858
Total Texas	225	9	52	286	4,509	3,637
North Louisiana	7	4	7	18	201	196
Gulf Coast Louisiana	3	0	3	6	151	124
Total Louisiana	10	4	10	24	352	320
Arkansas	2	0	1	3	40	32
Montana	1	0	1	2	36	44
Wyoming	0	0	0	0	28	25
Colorado	0	0	0	0	6	11
New Mexico	12	0	0	12	245	154
Utah	0	0	0	0	0	4
California	23	0	2	25	467	358
Total United States	388	46	113	547	9,197	7,313
Total previous week	384	43	130	557		
Difference	4	3	17	10		

Outstanding Fields—Highlights

(Week Ending May 1, 1937)

Field—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Anahuac	2	4	4	2,364	172	13,487
Hastings	13	14	4	1,985	163	12,789
Loma Novia	0	3	2	430	688	16,800
Seven Sisters	1	2	2	430	395	9,470
Saxet	2	33	7	650	412	33,430
Lopez	2	3	3	460	325	8,110
East Texas	57	110	39	1,186	22,583	463,248
Talco	9	36	12	4,123	295	22,500
Ector County	28	87	9	7,810	.....	.....
Winkler County	21	74	14	13,232	.....	.....
OKLAHOMA						
Oklahoma City	2	16	2	969	1,111	174,525
Fitts	3	68	6	2,151	705	96,500
Olympic	2	18	7	336	269	15,125
KANSAS						
Ellis County	4	37	2	1,418	91	4,755
Reno County	5	28	7	4,620	406	20,015
Russell County	12	50	9	15,432	663	29,070
Rice County	12	56	8	10,782	810	52,410
NEW MEXICO						
Lea County	18	112	12	2,783	2,109	101,610
LOUISIANA-TEXAS						
Rodessa, La.	1	15	4	1,451	268	48,965
Rodessa, Tex.	1	28	6	2,450	274	40,860
Lisbon, La.	1	19	0	0	4	1,000
MICHIGAN						
Buckeye	44	52	3	2,315	55	19,568

Eastern Field Report

By STAFF CORRESPONDENT

MORE DEEP TESTS PLANNED IN LOWER EASTERN FIELDS

PITTSBURGH, Pa., May 3.—The deep sands on the major structures in the lower Eastern fields will continue to be tested during the year and offer considerable interest in spite of several failures in the Oriskany sand in all three districts. Seismograph studies have been made on various anticlines, the latest being Chestnut Ridge on which the Summit well is located. This well in South Union Township, Fayette County, Pennsylvania, did not reach the Oriskany sand but bottomed in the Corniferous lime at 6,667½ feet, was completed as a gas well with a volume of 1,800,000 feet a day and the gas turned in the line.

At present deep tests are being drilled in Beaver County, Butler County, Lawrence County, Washington County, Pennsylvania, as well as in Hancock County, Kanawha County, Calhoun County, Jackson County, and Wirt County, West Virginia. Two are nearing the Oriskany sand. In Hancock County, John T. Galey reached the top of the Corniferous lime in the test on the Rachel Talbott farm in Grant district at a depth of 4,752 feet and is drilling through that formation which may be 230 feet thick. The hole has not been cased. In Calhoun County, Godfrey L. Cabot, Inc., is drilling at 6,104 feet on the Allen Hardman farm in Center district or 109 feet in the Corniferous lime.

Completions increased during the week with 40 operations finished. Four were dry holes, 22 gas wells, and 14 producers had an initial production of 289 bbls. There was one fair producer in Southwest Pennsylvania and one in Southeast Ohio, and West Virginia.

SOUTHEAST OHIO

In Athens County, Gross and McCune completed a test on the Floyd Dixon farm near Fisher in section 1, Waterloo Township, in the Berea sand at 1,160 feet. It produced 4 bbls. the first day after shot. In the central part of section 13, Ames Township, Carpenter and Glazier completed No. 17 John Smith in the First Cow Run sand at 323 feet and it produced 1 bbl. the first day after shot.

In Licking County, there were several completions. In the northeast quarter of section 14, Fallsbury Township, Blue Rock Oil & Gas Co. completed No. 3 Virgil L. Smith in the Clinton sand at a depth of 3,120 feet. It produced 50 bbls. the first day after shot. In the southwest quarter of section 10, same township, Emerald Petroleum Co. and others completed No. 9 J. E. Martin in the Berea sand at 8,815 feet. It will make a 2-bbl. pumper.

In Newark Township, Licking County, on the south side of Newark City, Wehrle Co. drilled No. 1 on its own property through the Clinton sand and it is a light gas well. In section 19, Franklin Township, Wehrle Co. drilled a test on the Harvey Carr farm through the Clinton sand and it is dry. In section 17, Perry Township, G. S. Lacknett completed a test on the T. R. Vanallen farm in the Berea sand at 666 feet gauging 40,000 feet.

In Medina County, E. R. Edson & Son Co. completed No. 5 Ray and Cora Koons, Lot 20, Chatham Township, in the Berea Grit at 550 feet. After shot, it produced 10 bbls. the first day.

In Washington County, O. K. Parrott completed a second test on the A. A. Goddard farm near Bartlett in section 29, Wesley Township, in the Mahoning lime at 610 feet. It produced 1 bbl. the first day after shot.

SOUTHWEST PENNSYLVANIA

Two producers and three gas wells were completed in Southwest Pennsylvania. The best completion was by South Penn Oil Co. on the Samuel Harvey farm in Center Township, Greene County, which reached the top of the Thirty Foot sand at 3,206 feet. It produced 125 bbls. the first day, and 105 bbls. the second.

In Amwell Township, Washington County, Manufacturers Light & Heat Co. deepened No. 2 A. O. Vankirk, a former gas well, to the oil pay or Fifth sand. Top of the sand was at 3,035 feet with oil at 3,038-41 feet. It is good for 25 bbls. a day and may be drilled slightly deeper.

In this township, Carnegie Natural Gas Co. has a fair gas well as the result of deepening No. 2 N. B. Redd. The Thirty Foot sand was at 3,872 feet with gas at 2,898-2,902 feet which gauges over 1,250,000 feet.

In Jefferson Township, Fayette County, Carnegie Natural Gas Co. completed a second test on the George M. Elliott farm at a total depth of 2,192 feet and it is a gas well from the Maxton and Murraysville sand with 413,000 feet.

In Greene County, Equitable Gas Co. deepened the well on the James H. Cole farm in Wayne Township, to 3,329 feet. The Bayard sand was at 3,267-84 feet with gas at 3,267-73 feet and again at 3,277-79 feet. It gauges 125,000 feet a day with a rock pressure of 425 pounds.

Other Operations

In Amwell Township, Washington County, Victor D. Behm and others are building a rig on the J. S. Smith farm. Equitable Gas Co. is hauling in a rig on the Mary Walker farm. South Penn Oil Co. is fishing at 1,206 feet in No. 3 J. Q. Zimmerman. Manufacturers Light & Heat Co. is building the rig for No. 6 A. O. Vankirk.

In South Franklin Township, Washington County, Dunn Mar Oil & Gas Co. reached the Gordon Stray sand at 2,845-89 feet with an oil show at 2,870 feet in No. 2 J. T. Baldwin. The Fifth sand was at 2,993 feet with oil at 2,994-98 feet and fishing for tools at 3,005 feet. Carnegie Natural Gas Co. is down 2,555 feet on the C. T. Dodd farm and 1,890 feet on the Alberta Iams farm.

In Greene County, J. G. Cochran is building a rig on the John Strope farm in Aleppo Township. In Richhill Township, Natural Gas Co. of West Virginia is drilling at 1,300 feet on the O. W. Grinnage farm and 1,050 feet on the Johnson farm. Manufacturers Light & Heat Co. is drilling at 650 feet on the D. M. Archer or Ward Chambers farm.

Equitable Gas Co. has resumed a drilling program in Greene County. It has a rig standing on the Z. D. Griffith farm in Wayne and Gilmore Townships; getting ready to deepen from 857 feet on the B. F. Thralls farm, Wayne Township; deepening the test on the George Craig farm in Perry County, and drilling at 2,125 feet; deepening the test on the W. G. Dugan farm in Cumberland Township and at 2,985 feet.

In Center Township, Greene County, Charles Mong and others cemented the 8¼-inch hole from 2,060-2,230 feet on the J. L. Metz lease. J. B. Orndoff is grading the road for No. 2 Mattie Scott. Other wells will be drilled on this line in the near future.

Deep Tests

In Butler County, American Natural Gas and T. W. Phillips Gas & Oil Co. were unable to shoot the Oriskany sand on the Perry S. Davis farm 1 mile south of Prospect in Franklin Township. The casing collapsed and has been reset and the hole is being bailed and cleaned out for shot although the Oriskany sand shows only 25,000 feet a day, it will be an interesting test.

In Beaver County, the test of John T. Galey and others on the Minnie Weigle heirs farm (Jean T. Duff) is drilling at 3,380 feet. The test of A. J. Wise, Jr., and others on the Beaver Falls Airport Corp. lease is drilling at 4,480 feet and the Tully lime has been reached. Both are in South Beaver Township.

In Washington County, the line and tools have not been recovered in the deep test of Norwood Johnston and others on the James McBurney farm in Mount Pleasant Township. Fishing is still in progress. In Lawrence County, Carnegie Natural Gas Co. is building rig for the deep test on the W. A. Currie farm in Shenango Township.

WEST VIRGINIA

Six producers were completed in West Virginia, the largest being in Lincoln County. In Harts Creek district, Sand Creek Gas Co. completed a test on the Phillip Hager farm in the Big Lime at a total depth of 1,200 feet showing for 50 bbls. a day of dark oil resembling Lima or Somerset grade.

In Roane County, South Penn Oil Co. completed No. 5 John and W. C. Stanley in Reedy district in the Berea sand at a depth of 2,587 feet. It is good for 10 bbls.

In Ritchie County, King Knob Oil Co. completed a test on the F. W. Hill farm in Murphy district at a total depth of 2,370 feet, through the Squaw sand, showing for 2 bbls. a day from the Injun sand and 25,000 feet of gas. In Grant district, W. R. Pierson completed a test on the A. S. Simmons farm at 2,020 feet, the Squaw sand, a half-barrel well.

In Tyler County, J. Fonner and others completed a test on the M. L. Bogard heirs farm in Union district in the Injun sand, depth 1,670 feet, showing for 2 bbls.

In Wirt County, Oil City Trust Co. account completed No. 6 on the Roberts, Pell and Newman tract in Spring Creek district in the Cow Run sand at 851 feet, good for 6 bbls.

Oriskany Gas Wells and Field

There were two gas wells and one dry hole completed in the Oriskany gas field in Kanawha County. In Elk district, Columbian Carbon Co. completed the test on the Mina F. Stauffer farm at 5,067 feet. Top of the Oriskany sand was at 4,998 feet and the gauge at the end of 12 hours was 2,816,000 feet. In this district, United Fuel Gas Co. brought in the test on the Mollie Shaffer and others lease and while still drilling it is showing for 4,500,000 feet. Top of the Corniferous lime was at 4,911 feet and the tools are now in the sand and drilling at 5,050 feet.

In this district, the test of Columbian Carbon Co. on the J. C. Jordon farm north of the small gas well on the Baxter farm and south of the drilling test on the B. R. Reed farm found the Oriskany sand dry. Top of the sand was at 4,931 feet and it was drilled to 4,987 feet.

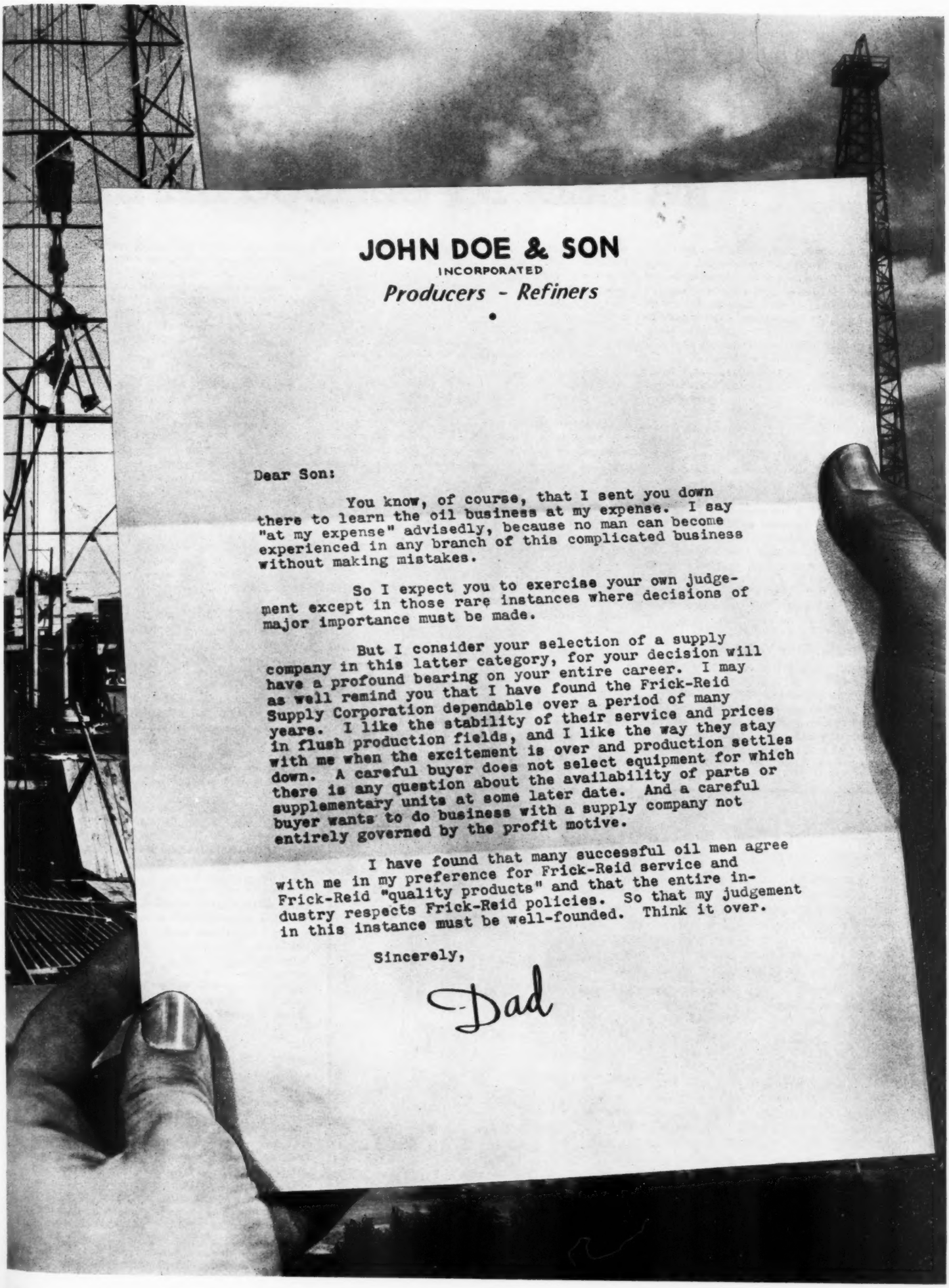
In Elm district, the test of Columbian Carbon Co. on the James R. Jones farm was deepened to 5,037½ feet and the gauge increased to 7,500,000 feet with a shut-in pressure of 1,675 pounds.

In Poca district, Columbian Carbon Co. topped the Corniferous lime on the B. R. Reed farm at 4,890 feet and is drilling at 4,960 feet. West Virginia Gas Co. is down 4,660 feet on the Victoria L. Burdette farm. Hays Oil & Gas Co. has reached 4,678 feet on the E. C. Humphreys test. Guy B. Ray is drilling at 1,275 feet on the Elmer Thaxton and others lease. Godfrey L. Cabot, Inc., is down 1,290 feet on the J. E. and M. D. Good farm in the western part of the field.

In Union district, Kanawha County, Glen Oil & Gas Co. is drilling on the Virginia Joint Stock Land Bank lease and has reached 1,480 feet. Godfrey L. Cabot, Inc., is building rig on the Sarah Ann Null farm.

In Poca district, Columbian Carbon Co. has made a location on the Shelby T. Jones farm 1 mile west of the test drilling on the B. R. Reed farm. The elevation is 809 feet.

On the Burning Springs anticline in Burning Springs district, Wirt County, Carnegie Natural Gas Co. is drilling a deep test on the W. C. Patterson farm scheduled for the Oriskany sand. At 2,022 feet, 10 to 15 bbls. of oil a day was struck in what is believed to be the Gordon sand. The well will, however, be drilled down.



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Dear Son:

You know, of course, that I sent you down there to learn the oil business at my expense. I say "at my expense" advisedly, because no man can become experienced in any branch of this complicated business without making mistakes.

So I expect you to exercise your own judgement except in those rare instances where decisions of major importance must be made.

But I consider your selection of a supply company in this latter category, for your decision will have a profound bearing on your entire career. I may as well remind you that I have found the Frick-Reid Supply Corporation dependable over a period of many years. I like the stability of their service and prices in flush production fields, and I like the way they stay with me when the excitement is over and production settles down. A careful buyer does not select equipment for which there is any question about the availability of parts or supplementary units at some later date. And a careful buyer wants to do business with a supply company not entirely governed by the profit motive.

I have found that many successful oil men agree with me in my preference for Frick-Reid service and Frick-Reid "quality products" and that the entire industry respects Frick-Reid policies. So that my judgement in this instance must be well-founded. Think it over.

Sincerely,

Dad

California Field Report

By
L. P. STOCKMAN

CALIFORNIA ALLOWABLE IS RAISED TO 600,900 BARRELS

LOS ANGELES, Calif., May 3.—California's allowable daily crude oil production was stepped up from the April quota of 580,000 bbls. to 600,900 bbls. for May by the Central Committee of California Oil Producers at a meeting held in Los Angeles, April 28, and an additional reserve of 3,000 bbls. per day was set aside to take care of new completions and recompleted wells. The Bureau of Mines had recommended an allowable of 579,900 bbls. for April and 583,000 bbls. per day for May. For new wells and those recompleted after being reconditioned during May, the committee recommended use of the .78 power factor with a top of 400 bbls. per day for the maximum well allotment.

On March 25 the central committee set the state's daily quota for April at 600,983 bbls. but less than 10 days later the committee was forced to reduce it to 580,000 bbls. due to excess production. Instead of an allowable production of 580,000 bbls., state production for April averaged approximately 620,000 bbls. or about 40,000 bbls. per day above the quota. Harry H. Maddren, vice president of Republic Petroleum Co., was elected a member of the central committee as chairman of the El Segundo field and E. D. Hardison of Union Oil Co. was named vice chairman. Operators in the Wilmington field selected William Reinhardt, vice president of Union Pacific Railroad, as chairman of the field committee and James Michelin vice chairman as their representatives on the central committee.

Santa Maria Valley

Operators in the Santa Maria Valley field for the first time since discovery of the district have put their wells on commercial production. Heretofore all wells have been shut in after completion due to lack of pipe line facilities but with completion of Union Oil Co. Battles tank farm this company is taking a pro rata production from each well based on allowables assigned by Umpire Pemberton. In addition to Union Oil Co. wells, production is being taken from R. R. Bush Oil Co., Hancock Oil Co. and A. N. Macrate. Union Oil Co. pipe line should be in operation within a few weeks as good progress is being made in installing the heating and pumping units at Battles tank farm and at Summit pump station. The company has erected two 40,000-bbl. tanks on the Battles property and has laid 8,000 feet of main trunk and 20,000 feet of gathering lines.

Crude from the Santa Maria Valley field, due to its low gravity, around 17 degrees, will be batched through the line to tidewater at Port San Luis in San Luis Obispo County and to facilitate movement will be heated at both the Battles pump station and at Summit, which is about midway along the line. The heaters, which will heat the crude to 180° F., will be direct fired and are equipped to burn either oil or gas. To prevent cracking, the oil will be pumped through the heaters at a rapid rate under 60 to 70 pounds pressure. Gas engine driven centrifugal pumps operated on gas will be used to move the oil through the line under a pressure of 800 pounds at both Battles and Summit pump stations. The pipe line from Santa Maria Valley field to tidewater including the existing main trunk is 8-inch and with the type of pump selected expects to be able to move 1,000 bbls. per hour. It is probable a deal will be worked out between Union Oil Co. and operators in the adjacent Gato Ridge field whereby oil from this field will be moved through Union's Santa Maria pipe line facilities. Both fields are undergoing conservative development.

Wilmington

The Wilmington field of Los Angeles Basin, discovered by General Petroleum Corp., has become the hottest spot in California from both a drilling and production standpoint. Wells are being started at the rate of about three a day and completions have been coming in one a day for two weeks. There are 35 drilling wells scheduled for completion within 30 days and production will show a substantial increase unless steps are taken to arrest drilling or reduce production. The large undeveloped acreage indicates drilling operations will continue for several months and General Petroleum Corp. and Union Pacific Railroad will still have a number of wells to drill at the end of the year. This means some work will extend into 1938. Wilmington is producing about 35,000 bbls. per day but this is changing so fast it is difficult to keep check of the production curve.

Several large wells were completed in the Wilmington field during the week, all in the drawbridge section. Union Pacific Railroad, which is developing several hundred acres of potentially productive land, completed Nos. 8 and 10. No. 8, bottomed at 3,581 feet and finished with 384 feet of 60-mesh perforations, was brought in flowing 1,872 bbls. of 17.8-gravity. No. 10 was brought in flowing 1,834 bbls. of 19.4-gravity from 3,044 feet. This company is drilling offset wells around the sides of its property and still has a number of undrilled locations. No wells have been drilled in the center of its property. Its No. 1 is flowing 1,710 bbls., No. 2 offset 390 bbls., No. 3 offset 1,090 bbls. and No. 5 offset 624 bbls. This gives the company a daily production of 7,520 bbls. from six wells, or an average per well of 1,253 bbls.

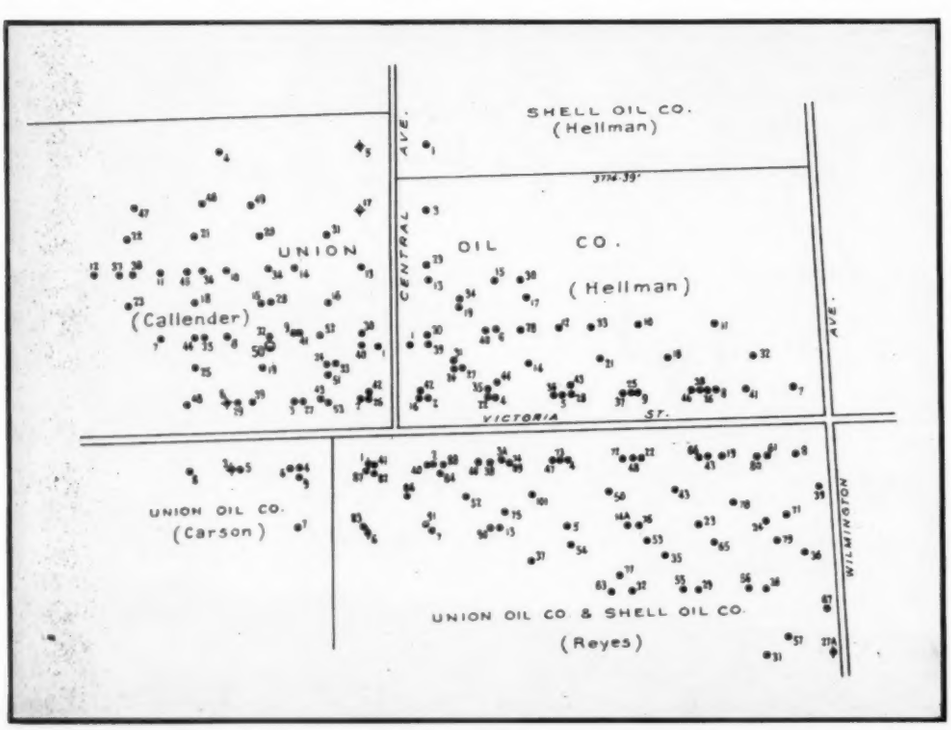
Ford Completions

General Petroleum Corp., discoverer of the Wilmington field, completed three wells in this area during the week, two on property of Ford Motor Co. No. 4 Ford, completed at 3,590 feet, was brought in flowing 1,651 bbls. of 24.9-gravity oil. No. 5 Ford tanked 1,740 bbls. of 24.8-gravity following completion at 3,600 feet. General Petroleum No. 2 Patten registered an initial of 531 bbls. of 18.4-gravity following completion at 3,575 feet. General Petroleum's completions on the Ford lease have registered the largest initials although wells on adjacent property of the Union Pacific Railroad have also shown large production. George F. Getty, Inc., has completed No. 7-W flowing 734 bbls. of 17.9-gravity from 3,610 feet. It was finished with an 8⅝-inch liner cemented through perforations at 2,829 feet, which carried perforations opposite the oil sand at 2,835-2,917 feet, 2,933-3,175 feet and at 3,215-3,607 feet.

Burnoel Petroleum Co. finished its first producer in the Wilmington field when No. 960-A-1 was brought in flowing 162 bbls. of 18.2-gravity from 3,579 feet. Pongratz Oil Co. also completed its initial producer when No. 1 Ronan was brought in pumping 649 bbls. of 17.4-gravity initially from 3,565 feet. Royalty Service Corp., one of the most aggressive operators, completed No. 2 Nelson flowing 963 bbls. of relatively clean 18.6-gravity per day from 3,552 feet. Wilmington Oil Development Co. No. 3-W was good for 481 bbls. of 17.9-gravity from 3,545 feet. No. 6 Wilmington of Westport Oil Co. registered an initial of 510 bbls. of 17.8-gravity cutting 3 per cent from 3,595 feet.

El Segundo

Ohio Oil Co. has been experiencing difficulty with No. 3 Gough in the El Segundo field as the hole resulting from the gas blowout of a few weeks ago does not appear to have any bottom. The company has been pumping cement and cotton seed hulls to plug the cavity without success. Union Oil Co. is expected to make a production test in No. 2 Security in the southern part within a few days and the outcome will be watched because of the edge conditions indicated in No. 1 Security one location east. Texas Co. No. 1 Security continues to be the largest producer with a current production of 2,210 bbls. of 26.5-gravity. Standard Oil Co. is offsetting this well to the northwest but it will be six weeks before it is ready for a production test. The El Segundo field has failed so far to live up



Union Oil Co. No. 50 Callender discovers new deep zone in Dominguez field

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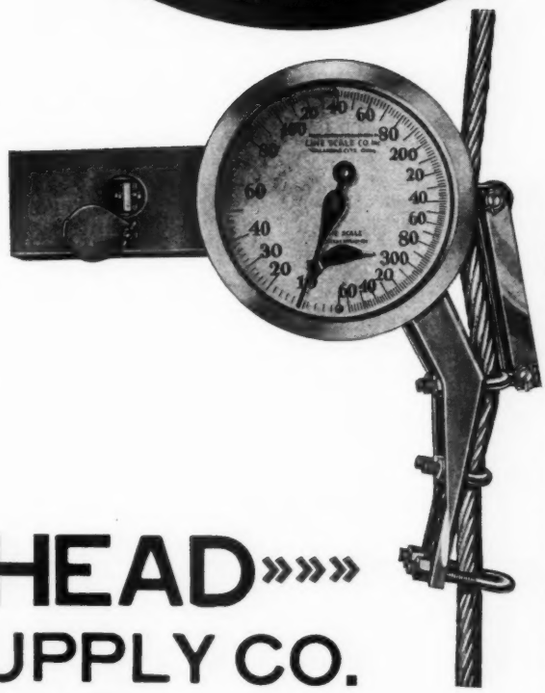

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to expectations from a production standpoint although drilling may change the aspect as there does not seem to be any uniformity of production. Wells in close proximity show a very great variation in initials for no apparent reason. At present Texas Co. Security lease appears the best property although a few months ago it did not look so hot. Production contours are so irregular they do not indicate anything except in a rough way the trend of structure.

Dominguez

Unless some last-minute delay occurs, Union Oil Co. should finish the first 10,000-foot producer in Los Angeles Basin within a few days. The well is No. 50 Callender in the Dominguez field, which is bottomed at 10,435 feet and has a string of 6⅝-inch landed and cemented at 10,050 feet. The 385 feet of zone to be tested out, looks exceptionally good. If it results in commercial production, it will be the ninth zone discovered in the Dominguez field. The Eighth Callender zone is virtually virgin territory as only a few wells have been completed in this horizon by Union Oil Co. and Shell Oil Co., which control practically all the productive acreage. The former is running four strings and the latter two.

Torrance

The Torrance field, so active a year or so ago, appears to be headed for obscurity again unless extension work proves successful and results in additional drilling. Development has dwindled to a few wells and operators are reluctant to drill in this district when there is so much acreage available in the Wilmington field still in a flush condition. Two wells and one recompletion were finished in the Torrance field during the week. The latter was Chansior-Canfield Midway Oil Co. No. 15 Del Amo returned to production pumping 155 bbls. of 24.6-gravity after the hole had been redrilled and deepened to 4,515 feet. Calmore Oil Co. No. 1 C.O.C. was good for 220 bbls. of 19.4-gravity on the beam following completion at 3,724 feet after the hole had been plugged back from 5,184 feet because of bottom water and lack of sufficient oil sand. No. 1 Redondo of Swyer Oil Co. was completed on the beam pumping 235 bbls. of 25.7-gravity initially following completion at 4,400 feet. This hole was finished with a 4¾-inch liner carrying 100 feet of perforated.

Kern River

Out on the west front of the Kern River field Republic Petroleum has completed No. 12 Straussburger and in doing so has improved the outlook of its California Technique lease in close proximity. No. 12 Straussburger in section 24-28-27 was brought in pumping 261 bbls. of 14.8-gravity from 2,026 feet after the hole had been finished with an 8⅝-inch liner including 201 feet of 160-mesh. Tide Water Associated Oil Co. No. 52 in section 23-38-27 has been completed pumping 90 bbls. of wet 14.5-gravity oil from 2,185 feet. The previous completion, No. 42, also showed evidence of edgewater. No. 52 appears to be cleaning up, however, and may cut under the pipe line maximum of 3 per cent.

Midway-Sunset

Two small wells were completed in the Midway-Sunset field of Kern County. Quality Oil Co. No. 5 Bull was brought in pumping 123 bbls. of 16.1-gravity cutting 24 per cent from 2,185 feet and No. 5 W. P. should be finished within a few days as it is standing cemented on top of the pay. No. 1 of Petrolia Royalties Corp. was good for only 35 bbls. of 15.8-gravity upon completion at 1,160 feet. Union Oil Co. No 5. Keene in section 22-32-23 was good for 340 bbls. of relatively clean 17.4-gravity from 2,030 feet. This hole was finished with a 6⅝-inch liner carrying perforations at 1,611-1,714 feet and at 1,790-2,028 feet.

Fruitvale

Drilling in the Fruitvale field of Kern County is showing a slight increase after several months of restricted drilling and completions during the next several weeks should be larger than for the past two months. Trico Oil & Gas Co. has completed No. 3 Knowles in section 23-29-27 pumping 220 bbls. of 15.7-gravity cutting 4 per cent from 3,191 feet. It was finished with an 8⅝-inch water string landed at 3,153 feet and a 7-inch liner carrying 38 feet of 250-mesh. The limited amount of oil sand open in this well will not be conducive to long lived production. Pal-Pen Oil Co. well No. 1 in section 23-29-27 was completed pumping 145 bbls. of 16.7-gravity from 3,165 feet and the crew was moved to No. 2 scheduled for early spud.

Mountain View

Although several potential producers are nearing completion in the Mountain View field this district has been showing evidence of serious depletion and the initial daily production of new wells should be relatively small. Now and then a new well may show substantial production but on the whole initials should be rather small. No. 9 Clendennen of Mohawk Petroleum Co. illustrates the situation as this well on a heretofore highly productive lease was good for only 140 bbls. of 28.5-gravity cutting 5 per cent from 5,735 feet. This hole was originally carried to 5,998 feet but was plugged back because of bottom water. It was finished with a 5-inch liner including 165 feet of 140-mesh. Shell Oil Co. completed a well in the Round Mountain field of Kern County a few days ago when its No. 13 Freeman was brought in pumping 80 bbls. of 15.7-gravity from 1,840 feet. In the Temescal district of Ventura County, Pacific Western Oil Co. has finished No. 10 Temescal pumping 180 bbls. of 23.4-gravity from 2,900 feet.

North Belridge

Texas Co. is rigging up rotary equipment in No. 1 Martin in the North Belridge field, section 22-27-20, preparatory to resuming drilling at 5,048 feet. This well has been suspended since March, 1931, but the lease is in good standing as the company had secured an extension of drilling requirements. No. 1 Martin is about 3,000 feet northwest of the present proved limits and should require deep drilling as the Temblor is rather well defined. The Wagonwheel horizon, however, may extend beyond the present limits but this will necessitate a depth of at least 8,000 feet. The North Belridge field has kept in line from a production standpoint despite the substantial potential by Belridge Oil

(Continued on Page 86)

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	April 22		April 15			
Intercoastal-domestic:	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	.....	.....	176,726	151,541
Gasoline	218,282	31,183	167,980	23,997	905,835	1,830,886
Kerosene	65,030	9,290	.....	.....	65,030	505,419
Foreign exports:						
Crude oil	524,403	74,915	139,913	19,988	4,237,177	2,897,001
Fuel oil	323,734	46,248	229,202	32,743	4,205,409	3,007,427
Diesel and gas oil	120,810	17,259	105,374	15,053	2,057,563	1,488,009
Gasoline	42,299	6,043	367,561	52,509	2,405,850	1,935,596
Kerosene	14,829	2,118	171,005	24,429	894,236	309,040
Other unfinished oil	111,089	15,870	.....	.....	290,354	13,375
Coastwise-domestic:						
Crude oil	231,511	33,073	.....	.....	1,951,339	2,052,935
Fuel oil	173,245	24,749	107,209	15,316	4,436,155	2,756,611
Diesel and gas oil	112,385	16,055	96,542	13,792	851,499	448,260
Gasoline	216,042	30,863	279,842	39,977	3,766,770	4,044,901
Kerosene	5,547	778	.....	.....	57,387	79,586

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	152,932	.....
Gasoline	.....	.....	.....	.....	25,778	.....
Asphalt	.....	.....	.....	.....	.....	60,950
Lubricants	6,848	978	.....	.....	6,848	18,129
Foreign exports:						
Crude oil	.....	.....	77,758	11,108	907,349	946,001
Fuel oil	122,615	17,516	49,918	7,131	591,615	1,149,782
Diesel and gas oil	103,305	14,758	25,904	3,701	1,001,312	230,787
Gasoline	220,498	31,500	108,109	15,444	1,795,034	987,753
Kerosene	.....	.....	.....	.....	252,035	243,420
Lubricants	.....	.....	.....	.....	234,631	90,587
Coastwise-domestic:						
Fuel oil	49,791	7,113	71,149	10,164	1,898,520	2,383,179
Diesel and gas oil	.....	.....	38,652	5,522	197,308	179,703
Gasoline	128,324	18,332	16,127	2,304	1,354,374	1,409,965
Kerosene	.....	.....	.....	.....	41,340	55,772

TENNESSEE FIELDS

NASHVILLE, Tenn., May 3.—A definite revival of the oil pools of Clay, Jackson, Pickett and Overton counties, Tennesse, is shown by an active leasing program, with eight rigs already drilling, according to Kendall E. Born, assistant geologist of the State Division of Geology, who has returned recently from a survey of the general area.

A new producer at 671 feet on the John Hargrove farm, 1½ miles southwest of Willow Grove in eastern Clay County accounts for the present interest in this general region. This well is on a well-defined upwarp of the rocks, according to a map issued by the State Division of Geology, and is another example of the close relationship of oil and gas accumulation with anticlines or upwarps in this part of Tennessee. Approximately 5,000 bbls. of crude oil have been shipped from this one well since March. No. 2 test on this farm is now drilling at approximately 300 feet and a third hole will start in the near future.

North of Lillydale in northeastern Clay County, an old well drilled deeper in December, 1936, encountered oil at a depth of 726 feet with a reported initial flow of 100 bbls. per day. This new production has excited considerable interest and four rigs are now drilling in this region.

Oil seeps have been noted along the upper Cumberland and its tributaries in Clay, Pickett, Jackson and Overton counties for more than 100 years and oil and gas were reported in wells drilled in search of brine for salt-making in the early nineteenth century by the early settlers in southern Kentucky and northern Tennessee. The meager accounts of these wells indicate that a number of them yielded considerable quantities of both oil and gas along with the brine. In one or two instances, wells, exhausted of their brine content by constant pumping, began to furnish oil instead of salt water and were abandoned in disgust by their owners. One of the earliest of these wells is reported to have been dug or bored as early as 1820 on Wolf River about 1 mile above its mouth near the Clay-Pickett County boundary line. The oil covered the river and, when set on fire, produced a "terrible conflagration."

The bringing in on August 18, 1923, of the No. 1 Marcum at Willow Grove, in Clay County, focused the attention of oil and gas interests toward the unusual opportunity afforded by the shallow production in this part of the state. Encountering the oil sand at 412 feet, the Marcum well flowed uncontrolled under heavy gas pressure for the first hour or two. Although a considerable amount of oil was lost before the well was brought under control, the flush production has been estimated conservatively at 2,000 bbls.

In 1924 production was obtained in Tinsleys Bottom along the Cumberland River about half way between Celina and Gainesboro, and in 1925, 8,500 bbls. of crude oil were produced from this pool. After being temporarily abandoned for the past few years, developments are now under way in this area which indicate that a considerable amount of oil may still be produced from this field. One new well has already been drilled and put on pump and another test is well along toward completion.

After the discovery of oil at Willow Grove and Tinsleys Bottom, a number of small oil fields were developed during 1926, 1927, and 1928. Chief among these pools are the Peterman Bend area, just east of Celina; the Mill Creek pool, just north of the Jackson-Clay county line; the Fox Springs pool, between Celina and Willow Grove; the Lillydale field, in the vicinity of that town; along Ashburn Creek in southeastern Clay County; on Lock Branch, 6 miles north of Gainesboro; and along Jouett Creek in western Pickett County. Although accurate production figures are not available, it is probable that more than 100,000 bbls. of crude oil have been shipped from these fields.

The revival of the Tennessee oil pools, Walter F. Pond, state geologist, says, is in response to rising crude oil prices. Small producing wells, which could not be pumped economically at the low prevailing prices for petroleum in 1929-1930, may well be operated at a profit under present prices of more than $1 per barrel at the well. If present proposed development materialize, some two dozen wells will be drilled in Clay and adjoining counties during the spring and summer of 1937.

Southwest Texas District

By
GEORGE WEBER

WILDCAT TEST MAY EXTEND DRISCOLL FIELD SOUTHWARD

CORPUS CHRISTI, May 3.—New strikes in Southwest Texas continued to swell the total of field discoveries in extensions. The recent spurt of discoveries which has made this area the object of considerable attention during the past month, last week supported by findings in a Nueces County wildcat, several field tests and a large number of new locations.

The Lower Gulf Coastal area was the scene of most of the new development. Laredo district activities have slumped recently and show little recovery this week. The Fault Line Zone is increasingly active with operations extending out from the boom centers of Caldwell and Guadalupe counties. Further development of many of the newly opened production spots throughout South Texas is proceeding with almost unprecedented rapidity.

The outstanding strike of the week was reported by Wellington Oil Co. and Seaboard Oil Corp. In their joint wildcat, No. 1 Dugger, sand at an undisclosed depth tested 575 feet of pipe line oil in 10 minutes at a working pressure of 100 pounds. Quarter-inch chokes were used top and bottom. The wildcat is in the northwest corner of section 125 of the Pauls Subdivision, on a lease of 1,320 acres held by the two operators.

The test is considered to indicate an extension to the Clara Driscoll field, which lies 2 miles to the north. Production in that field is found at 3,900 feet, as well as at other levels, and the wildcat drill stem test was believed to have been made at between 3,800 and 3,900 feet. No. 1 Dugger is about 1½ miles southeast of Driscoll townsite.

In the same general area, the old Stratton gas field again came into prominence, as Camp Production Co. No. 1 Phillip Wardner, a semfwildcat, came in making a high gravity oil from a Frio sand. The Camp test, about three-fourths mile north and slightly east of the discovery well of Stratton, Stanolind Oil & Gas Co. No. 1 Stratton, wet gasser. The discovery of this new horizon is expected to bring on considerable drilling in the extreme southwest Nueces County area. The Stanolind well produces at 4,700 feet, while the new Camp producer is making 2 to 3 bbls. per hour of 49.3 gravity oil on a one-eighths inch choke through perforations at 5,992-6,002 feet. The test is bottomed at 6,715 feet.

McCampbell Field

Another Coastal field gained a new producing sand during the past week, but results were relatively disappointing. The McCampbell field of Aransas and San Patricio counties is the scene of two field tests which are bringing in deeper production. Buckingham Oil Co. No. 2-B McCampbell in Lot 13, Block 40, has cored a sand at 7,112-22 feet, and at latest reports, was flowing 76 bbls. per day of fluid comprising 15 per cent salt water and the rest 54.5 gravity oil. Encouraged by shows in this test, Buckingham has perforated casing in No. 6-A McCampbell at 7,114-22 feet and is completing that test in the new sand.

The results of this week's work in McCampbell bring success to several weeks of attempts on the part of Buckingham to obtain commercial production in a lower McCampbell sand. Following its example, Rutherford Oil Co. is reported to have perforated casing at 7,095-7,113 feet in No. 1 Schrivner, which is making large volumes of gas and a spray of oil.

To the east of McCampbell in Aransas County, Barnsdall Oil Co. No. 2 Kate Edwards was last reported to be reaming down at total depth of 7,519 feet to set 9⅝-inch protective string. The test, offsetting No. 1 which several months ago blew out and cratered at total depth of 7,996 feet, last week blew out 1,000 feet of water cushion and showed a recovery of 3 gallons of distillate at 7,447-67 feet before the testing tool could be closed. The test lasted for approximately three minutes. A second test, with the hole bottomed at 7,487 feet showed similar results, and drill stem was twisted off while reaming down for a third. The hole was cleaned during the past week.

Nueces County

Newly opened fields in Nueces County showed mixed results during the week. Production in the Chapman ranch field, 12 miles southwest of Corpus Christi, was defined on the north and east as Seaboard Oil Co. and I. J. Allen No. 1-B Chapman was abandoned at a total depth of 7,012 feet. The test missed both sands which have been opened to oil production in the field, namely the 6,464 and 5,046-foot horizons. The London field in the vicinity of Chapman ranch added a gasser to production as Gem Oil Co. No. 1 Stockton came spraying some distillate at 4,755-61 feet. That sand was cored slightly below the producing horizon of the field. Activity in the Flour Bluff field, which is rapidly becoming one of the major fields in the area, has taken an upward swing, and nine rigs are now drilling in the pool.

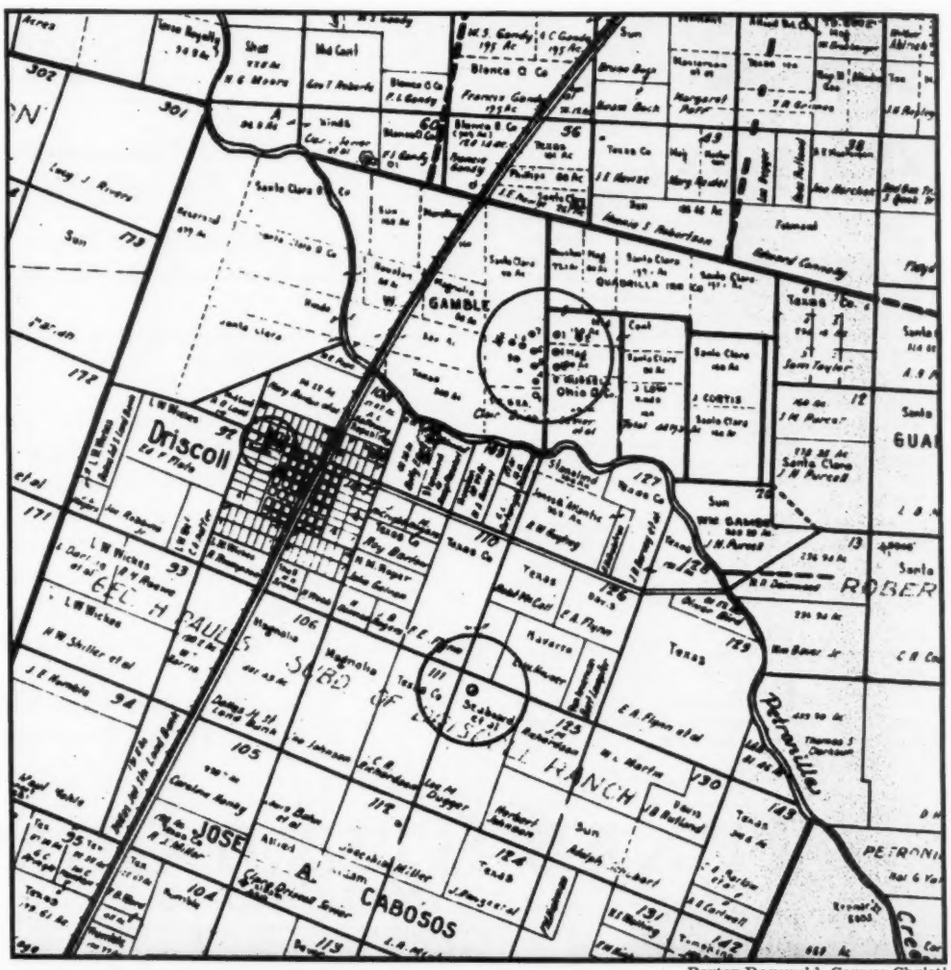
In the Agua Dulce area, two wells were completed. Walker and others No. 1 Ingram and Lockhart No. 1-B Elliff made wet gassers. In Agua Dulce the deepest test drilled in the county was making hole, as United Production Co. drilled below 8,880 feet in No. 1 Harvey.

Deep tests also marked the outstanding development in the Saxet field. This hot spot, which has been the leading field in Southwest Texas activity for several months, is expanded weekly by completions in its several producing horizons. Considerable drilling activity at present is directed to the deep sands below 6,000 feet. During the week one new producer was brought in on the 6,900-foot horizon. South of Clarkwood, Potter & Snowden No. 1 Kocurek was completed for 131 bbls. per day. The test, which is a north offset of the Howell wild well, had oil sands at 3,115-39 and 3,939-48 feet, and is producing from the deeper zone at total depth of 4,209 feet.

Laredo District

A drilling boom which promises to show record proportions for a new field in the Laredo district is getting under way at North Sweden. The field, opened only a few days ago by Frank Gravis No. 1 Vaello Puig, is already the scene of several rigs. A total of nine locations has been staked; and of these, five are already moving in machinery. The general area has been the focus of considerable interest since the discovery of the Sweden field late in January, but the discoverers of that pool, Hiawatha Oil Co., held sufficient acreage surrounding their strike to preclude immediate outside

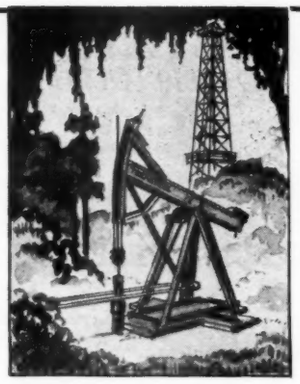
(Continued on Page 100)



Porter Regenold, Corpus Christi.

Wellington Oil Co. and Seaboard Oil Corp. apparently extends the Clara Driscoll field 2 miles south

SUCKER RODS..



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TEXASTEEL

Kansas Developments

By
DAL DALRYMPLE

COMPLETE LARGE OIL WELLS IN TRAPP AND SILICA POOLS

The Trapp pool of southern Russell County continues to set a fast pace in Kansas, with each succeeding week recording numerous completions and first reports. The largest Trapp well to date was completed the past week at Phillips Petroleum Co. No. 7 Hoffman, section 31-15-13w, which made potential of 2,896 bbls. of oil. This exceeds by 86 bbls. the next largest well, Coralena Oil Co. No. 13 Trapp. Five other wells were completed in the pool, four making potentials in excess of 2,000 bbls.

The Silica field of western Rice County, not to be outdone, accounted for seven of the week's completions in Kansas. Three of these made potentials in excess of 2,000 bbls. daily, the largest being Bradley Oil Co. No. 7 Mitchell, section 32-19-10w, with a rating of 2,697 bbls. daily.

Several other major producing areas also shared in the big wells. The Lerado pool of Reno County had the largest well of the seven-day period with Shell Petroleum Corp.'s No. 7 Whipple, section 15-26-9w, a 3,701-bbl. producer. Five producers were completed in the Burrton field, Reno County, the largest being Wilcox Oil & Gas Co.'s No. 4 Neufeldt, section 12-23-4w, with potential of 1,513 bbls. Grace Oil Co. completed a 2,500-bbl. well in the Theede area, Rice County; the Texas Co. provided a 2,662-bbl. well in the Bemis pool, Ellis County; the Texas Co. completed a 1,914-bbl. well in the Barton County sector of the Bloomer pool, and the Gulf Oil Corp. got a 1,950-bbl. producer in the Ellsworth County extension of the Bloomer pool; and Carter Oil Co. completed a 1,282-bbl. well in the Lorraine field, Ellsworth County.

Wildcat activity, now at its highest point in Kansas, shows no sign of decline. Indeed, 18 new wildcats were included in the first reports of the week. These were in Rooks, Ellis, Trego, Barton, Rice, Harvey, Woodson, Greenwood, Elk, Cowley, Sumner and Chautauqua counties.

Pryor & Lockhart and the Ranger Oil Co. are starting a deep wildcat test in C SE section 7-31-13w, Barber County.

Rice County

Seven of nine Rice County completions were in the Silica field. Bradley Oil Co. No. 7 Mitchell, SE SE SW section 32-19-10w, made potential of 2,697 bbls. of oil from Siliceous lime at 3,287-93 feet, total depth.

Stanolind Oil & Gas Co. No. 2 Panning, NE SW NW section 33-19-10w, had Siliceous lime at 3,280 feet, total depth, 3,291 feet; acidized, swabbed 81 bbls. of oil in one hour and made potential of 2,604 bbls. Same company's No. 8 Mitchell, SE NE SW section 32-19-10w, made potential of 1,872 bbls. of oil from Siliceous lime at 3,298 feet; total depth, 3,313 feet.

Republic Natural Gas Co. No. 2 S. Wendell, SW NE SE section 32-19-10w, had Siliceous lime at 3,278-95 feet, total depth, and had potential rating of 2,245 bbls. of oil.

Gulf Oil Corp. No. 7 S. Wendell, NE SW SE section 32-19-10w, topped Siliceous lime at 3,284 feet, was bottomed at 3,299 feet, acidized, pumped 916 bbls. of oil in 18 hours, making potential of 1,354 bbls.

J. H. Tatlock No. 1 Poncin, NW NW NE section 5-20-10w, found Siliceous lime at 3,286 feet, was bottomed at 3,298 feet, and pumped 230 bbls. of oil in 2 hours and 15 minutes. Same operator's No. 2 Poncin, SW NW NE section 5-20-10w, topped Siliceous lime at 3,293 feet; total depth, 3,299 feet; swabbed 240 bbls. of oil in four hours and pumped 171 bbls. in three hours.

In the Theede pool, Grace Oil Co. No. 2 Gossman, NE SE NE section 8-21-7w, had Conglomerate at 3,358-68 feet, total depth, and made potential of 2,501 bbls. of oil.

T. C. Johnson No. 1 Shubert, SW cor. section 9-20-10w, wildcat, topped anhydrite at 474 feet; Topeka, 2,630 feet; Kansas City, 3,077 feet; Simpson, 3,373 feet; Siliceous 3,408 feet; had a hole full of water and was abandoned at 3,426-29 feet, total depth.

New work in Rice County: Shell Petroleum Corp. and others No. 1 Haxton B, NE NE SW section 29-18-9w, wildcat, location; Continental Oil Co. and others No. 1 Fuller A, SW SW NE section 12-18-8w, location; Stanolind Oil & Gas Co. No. 1 Mooney, NE NE SW section 5-19-10w, wildcat, location; Gulf Oil Corp. No. 8 S. Wendell, SE SW SE section 32-19-10w, building rotary rig; Republic Natural Gas Co. No. 6-A Wendell, NE SE NE section 32-19-10w, twin well, building rotary rig; same company's No. 5 Wendell, SW SE SE section 32-19-10w, moving in material; Gulf Oil Corp. No. 1 Poncin, NW SW NE section 5-20-10w, building rotary rig; same company's No. 3 Schmidt, NW SW SE section 6-20-10w, building rotary rig; J. H. Tatlock No. 7 Berscheit A, NE SE SW section 6-20-10w, rig; same operator's No. 8 Berscheit A, SE SE SW section 6-20-10w, moving in material; J. D. Davis and others No. 2 McFarland, NW cor. section 7-20-9w, cellar; E. V. Holland and others No. 1 Malone, SE NW NE section 19-20-9w, rig; Atlantic Refining Co. and others No. 3 Hughes, NW SE SE section 6-21-7w, rig; Derby Oil Co. No. 2 Thode, NW SE SE section 8-21-7w, cellar; Grace Oil Co. No. 3 Gossman, SE NE NE section 8-21-7w, rigging up rotary; Dick Sage and others No. 5 Gossman, SW NW NW section 9-21-7w, rigging up rotary; Holland and others No. 1 Brothers, SE cor. section 12-21-7w, wildcat, cellar.

Russell County

Six producers were completed in the fast growing Trapp pool, Russell County, the past week, the largest being Phillips Petroleum Co. No. 7 Hoffman, SE NE SE section 31-15-13w. It found Siliceous lime at 3,335 feet, was bottomed at 3,343 feet, and swabbed 374 bbls. of oil in 10 hours. After treating with 4,000 gallons of acid, it made potential of 2,896 bbls. of oil.

W. I. Southern, Inc. No. 6 Michaelis, SW NE NW section 31-15-13w, made potential of 2,589 bbls. of oil after acidizing Siliceous lime topped at 3,273 feet; total depth, 3,277 feet.

Skelly Oil Co. No. 4 John Neidens, NW NW SE section 32-15-13w, had Siliceous lime at 3,323 feet; total depth, 3,335 feet; acidized and produced 2,430 bbls. of oil on potential test.

Derby Oil Co. and Reserve Development Co. No. 2 Michaelis, NW SE NW section 31-15-13w, pumped 1,271 bbls. of oil in 15 hours after treating with acid, making potential of 2,476 bbls. Top of Siliceous lime was 3,254 feet; total depth, 3,257 feet. Same operators' No. 8 Michaelis, SE SE NW section 31-15-13w, was acidized and pumped 2,378 bbls. of oil on potential test, from Siliceous lime topped at 3,248 feet; total depth, 3,253 feet.

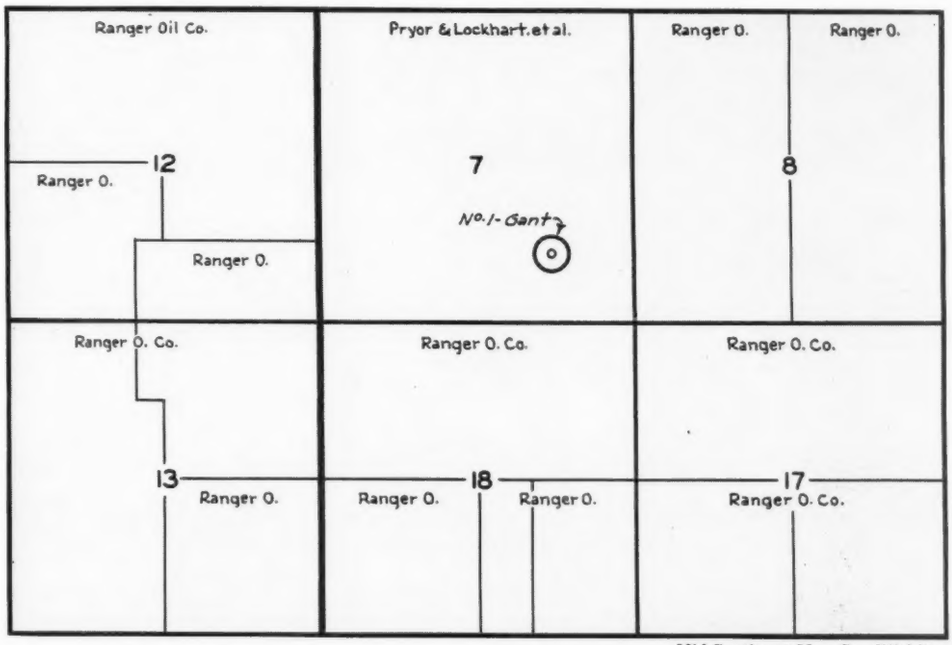
Coralena Oil Co. No. 1 Sellens Estate, SW SW SE section 29-15-13w, had Siliceous lime at 3,314-16 feet, total depth, was acidized and pumped 1,641 bbls. on 24-hour potential test.

In the nearby Sellens pool, Sinclair Prairie Oil Co. No. 5 Hafferman, SE NW NE section 26-15-13w, found Kansas City lime at 3,003 feet, was bottomed at 3,025 feet and plugged back to 3,020 feet. After acidizing it pumped 250 bbls. of oil in 18 hours, making potential of 352 bbls.

A Gorham completion was Central Petroleum Co. and others No. 5 Rouback, NE cor. section 15-14-15w. Gorham sand was found at 3,261-64 feet, total depth. It made potential of 1,343 bbls. of oil.

One well was completed in the Big Creek area at Ohio Oil Co. No. 4 Harbaugh, SW SE NW section 25-14-15w. After finding Gorham sand at 3,151-56 feet, total depth, it made potential of 634 bbls. of oil.

First reports of new work in Russell County: Empire Oil & Refining Co. No. 1 Strecker B, NE cor. section 36-14-14w, building rotary rig; W. I. Southern, Inc. No. 3 Sellens heirs B, SE SW NW section 30-15-13w, cellar; Phillips Petroleum Co. No. 10 Hoffman,



Mid-Continent Map Co., Wichita.

Pryor & Lockhart and Ranger Oil Co. No. 1 Gant, is a new Barber County wildcat in C SE section 7-31-13w, northwest of Medicine Lodge

NE SW SE section 31-15-13w, location; Gulf Oil Corp. No. 5 Michaelis, NW NE SW section 32-15-13w, building rotary rig; Skelly Oil Co. No. 5 Neidens, SW NW SE section 32-15-13w, building rotary rig; Phillips Petroleum Co. and others No. 2 Eichman, NE NW SE section 34-15-13w, building rig.

Estimated Daily Production

Estimated daily average production of Kansas for the week ending May 1, and for the preceding week, was as follows:

	Barrels	
	May 1	Apr. 24
Oxford City	2,175	2,300
Burrton	16,350	15,875
Ritz-Canton	5,550	5,500
Graber	1,450	2,975
Hollow-Nikkel	3,750	3,700
Lerado	2,675	2,675
Voshell	2,925	2,900
Wellington	3,325	3,150
Ellsworth County:		
Lorraine-So. Lorraine	6,475	5,475
Other pools	1,570	1,320
Rice-Barton counties:		
Bloomer	5,725	4,725
Chase	10,425	8,875
Geneseo	2,050	2,650
Raymond	2,050	2,400
Silica	21,025	21,450
Keesling	2,575	2,675
Hauschild	4,325	4,525
Miscellaneous Rice	9,960	8,475
Miscellaneous Barton	4,090	4,295
Russell County:		
Fairport	2,345	2,340
Gorham-E. Gorham	3,155	3,210
Russell	2,205	2,500
Sullivan	7,285	6,550
Trapp	8,195	7,250
Miscellaneous Russell	5,885	8,355
Sedgwick County:		
Valley Center	1,185	1,170
Miscellaneous	2,740	1,865
Ellis County:		
Bemis	2,650	3,900
Miscellaneous Ellis	2,105	1,890
Kingman County	975	865
Stafford County	3,305	3,080
Greenwood County	9,500	9,500
Butler County	17,550	17,680
Other fields	20,800	20,985
Total Kansas	198,350	197,925

Reno County

The largest of seven producers completed in Reno County was in the Lerado pool, at Shell Petroleum Corp. No. 7 M. Whipple, NE cor. section 15-26-9w. After topping Viola lime at 4,128 feet, stopping at 4,133 feet, total depth, and treating with acid, it flowed 967 bbls. of oil in six hours, and made potential of 3,701 bbls., cutting 1 per cent water.

Wilcox Oil & Gas Co. had the largest of five new producers in the Burrton field at No. 4 Neufeldt, SE SW SW section 12-23-4w. It topped Chat and set 7-inch casing at 3,420 feet, was bottomed at 3,420 feet, and after perforating casing and acidizing made potential of 1,513 bbls. of oil.

Barnsdall Oil Co. No. 3 Westfall B, NW NE SE section 19-24-4w, topped Chat at 3,320 feet; total depth, 3,386 feet; flowed 415 bbls. of oil in 17 hours; acidized and made potential of 1,454 bbls. of oil, with 6 per cent water.

Shaffer and others No. 6 Tucker, SW NW SW section 20-24-4w, found Chat at 3,236 feet, had pay at 3,378-90 feet, total depth, acidized and made potential of 770 bbls. of oil.

Sinclair Prairie Oil Co. No. 4 Mary Collins, NE SW SW section 3-24-4w, had Chat at 3,267 feet and was bottomed at 3,359 feet. It flowed 99 bbls. of oil; was acidized and flowed 291 bbls. of oil on potential test.

Olson Drilling Co. and Shell Petroleum Corp. No. 5 Fast, NE NE SW section 25-23-4w, pumped 35 bbls. of oil in 24 hours after topping Chat at 3,275 feet; drilling to 3,385 feet, total depth; plugging back to 3,359 feet and acidizing.

In the Hilger pool, Magnolia Petroleum Co. No. 4 M. Harris, NW SE NW section 9-26-4w, pumped 821 bbls. of oil, with 4 per cent water, in 24 hours after acid treatment. It had Viola lime at 4,099-4,101 feet, total depth.

Olson Drilling Co. and others No. 1 Herriman, NW cor. section 22-24-8w, wildcat, topped Chat at 3,754 feet; Viola lime, 4,068 feet; Simpson, 4,074 feet; Siliceous, 4,154 feet, and was dry and abandoned at 4,193 feet, total depth.

The following new operations in Reno County were reported: Tabor & Coleman and others No. 1 Mueller, NE NE SE section 25-24-5w, location; Sinclair Prairie Oil Co. No. 2 Showalter, NE NE SE section 8-24-4w, location; Carter Oil Co. No. 5 Hogan, NW NE SW section 19-24-4w, location; same company's No. 6 Hogan, C SW section 19-24-4w, location; Empire Oil & Refining Co. No. 5 Scheuchzer, SW SE NW section 20-24-4w, location; Davis and others No. 1 Van Sickle, NW cor. section 21-24-4w, location; Shell Petroleum Corp. No. 4 Lee, C S half S half SE section 10-26-9w, moving in material; same company's No. 8 Whipple, SE NW NE section 15-26-9w, moving in material.

Barton County

Two producers were completed in the Bloomer area, Barton County, Yarnell & Spencer No. 4 Patzner, NE NE SE section 36-17-11w, had Siliceous lime at 3,236-38 feet, total depth, and made potential of 2,985 bbls. of oil in 24 hours, down one and one-half hours.

The Texas Co. No. 8 Bloomer, NE cor. section 36-17-11w, pumped 1,914 bbls. of oil in 24 hours after acid treatment. Top of Siliceous lime was 3,278 feet; total depth, 3,286 feet.

In the Hiss pool, Simpson Oil Co. No. 1 Asher, NE SE NW section 31-20-13w, was dry and abandoned at 3,647 feet, total depth, in Conglomerate.

Hinkle and Phillips Petroleum Co. No. 1 Frederick, NW cor. section 12-16-13w, wildcat, topped anhydrite at 862 feet; Kansas City lime, 3,110 feet; Conglomerate, 3,370 feet; Siliceous lime, 3,372 feet; had a hole full of water at 3,389-91 feet, total depth, and was abandoned.

New Barton County operations: Empire Oil & Refining Co. No. 3 Demel, SW SE SW section 9-16-13w, rigging up rotary; Republic Natural Gas Co. and Continental Oil Co. No. 1 Moeder, NE NE SW section 25-17-13w, wildcat, moving in material; Spencer & Yarnell No. 3-A Patzner, NW NE SE section 36-17-11w, twin well, drilling at 330 feet; Magnolia Petroleum Co. No. 1 Zink, NW NW SE section 13-18-11w, wildcat, location; Silverstein & George and others No. 1 Otte, SE SE NW section 2-19-14w, wildcat, location; C. B. Davis and Gulf Oil Corp. No. 10 Steckel, NE SW SE section 1-20-11w, rig; same operators' No. 11 Steckel, SE NW SE section 1-20-11w, rig; Lario Oil & Gas Co. and Atlantic Refining Co. No. 6 Peter, SW NW NW section 24-20-11w, building rig.

Ellsworth County

In the Ellsworth County sector of the Bloomer pool, Gulf Oil Corp. No. 1 Grizzell, SW SW NW section 31-17-10w, made potential of 1,950 bbls. of oil and was completed. It topped Siliceous lime at 3,248 feet, was bottomed at 3,259 feet, total depth, and swabbed 437 bbls. of oil in six hours, later pumping 1,301 bbls. in 16 hours.

Carter Oil Co. and others No. 2 Georgie Community, NE SE SE section 27-17-9w, Lorraine pool, had Siliceous lime at 3,143 feet; total depth, 3,155 feet; pumped 215 bbls. of oil in eight hours; acidized and pumped 1,282 bbls. of oil in 24 hours.

Continental Oil Co. No. 1 Buehler, SE cor. section 33-17-8w, Edwards area, had Siliceous lime at 3,272 feet; was bottomed at 3,288 feet; plugged back to 3,281 feet; acidized, swabbed 19 bbls. of water and 5 bbls. of oil in eight hours and was temporarily abandoned.

The only new test reported in Ellsworth County was Continental Oil Co. and Empire Oil & Refining Co. No. 10 Janssen B, SW NE SW section 34-17-8w, location.

Ellis County

A large producer was completed in the south end of the Bemis pool, Ellis County, at Texas Co. No. 1 Bemis A, NE cor. section 28-11-17w. It had Siliceous lime at 3,442 feet; total depth 3,458 feet; pumped 1,375 bbls. of oil in 14 hours and made potential of 2,662 bbls. in 24 hours, down three hours.

In the Victoria pool, Watchorn Oil & Gas Co. No. 1 Brown, NW SE SE section 3-14-17w, found Siliceous lime at 3,498 feet, was bottomed at 3,541 feet, and swabbed 43 bbls. of oil in 24 hours. It was acidized and pumped 535 bbls. in 24 hours.

New work in Ellis County: Lario Oil & Gas Co. No. 4 Marshall, SE cor. section 36-11-18w, moving in material; Deep Rock Oil Corp. No. 4 Baumer, NW NE NW section 27-11-17w, rig; L. H. Wentz, Inc. No. 1 Bemis, NE NE NW section 28-11-17w, moving in material; Lario Oil & Gas Co. No. 3 Marshall, SW cor. section 31-11-17w, moving in material; Twin Drilling Co. and others No. 1 Craig, NE NE SE section 6-11-16w, wildcat, rig; Republic Natural Gas Co. No. 1 Romine, NW cor. section 18-11-16w, rig; Carter Oil Co. No. 3 Staab, SE SE NW section 11-12-18w, location.

Butler County

One new Butler County producer was completed at Polhamus No. 5 Semisch, SW SW NE section 5-28-7. It had Bartlesville sand at 2,737-54 feet, total depth, where water intruded; plugged back to 2,751 feet, was shot and pumped 50 bbls. of oil and 150 bbls. of water in 24 hours.

Sid Neff and others No. 1 Church, SW NE SE section 8-28-5, an old Butler County wildcat, was deepened from 200 feet to 1,875 feet and was dry and abandoned.

Phillips Petroleum Co. and others No. 2 Huston, SW SE SE section 1-25-3e, was a machine.

Sumner County

A new Wellington pool producer was completed at Stelbar & Dewar No. 2 Barlow A, C W half E half SE section 33-31-1w, Sumner County. It had Chat at 3,674 feet; total depth, 3,711 feet, flowed 345 bbls. of oil in 10 hours and made potential of 590 bbls.

First reports of new Sumner County operations: Sinclair Prairie Oil Co. No. 1 Turk, NW NW SW section 4-32-1w, building rotary rig; Texas Co. No. 6 Carr, NE SE NE section 5-32-1w, cellar; Amerada Petroleum Corp. and Sunray Oil Co. No. 13-A Gassoway, SE SE SW section 14-32-2e, an old well being deepened, drilling at 3,154 feet; John Burton and others No. 1 Springate, NE NE SW section 30-33-2e, wildcat, building rig.

Cowley County

Stevens County Oil & Gas Co. No. 1-A Olds, NW cor. section 9-33-7e, Cowley County, had sand at 1,140-44 feet, total depth; plugged back to 1,143 feet, and produced 2,000,000 feet of gas and 5 bbls. of oil daily.

Tom Palmer No. 1-A Lowe, SW SE SE section 3-32-5, Cowley County wildcat, topped lime at 3,114 feet; based Mississippi at 3,530 feet; had a hole full of water in Siliceous lime at 3,588-89 feet, total depth, and was dry and abandoned.

Two new tests in Cowley County were reported: Tom Palmer and others No. 1 Orgroskey, SE SE NW section 31-32-5e, wildcat, was moving in material. J. N. Wallace No. 1 fee, SW SE SE section 10-33-4e, wildcat, was rigging up machine.

McPherson County

Hutchinson Oil & Gas Co. and others No. 1 Berg, SW SW SE section 15-20-3w, wildcat, McPherson County, found Kansas City lime at 2,430 feet; Chat, 3,082 feet; Maquoketa, 3,506 feet; Viola, 3,565 feet; Simpson, 3,598 feet; had a hole full of water in Wilcox sand at 3,606-13 feet, total depth, and was dry and abandoned.

M. Reynolds and others No. 1 White, NW NE NE section 35-18-1w, McPherson County, was drilling at 320 feet, on first report; Derby Oil Co. and L. H. Wentz No. 1 Goering, SE SE NE section 17-21-1w, building rotary rig; Continental Oil Co. and others No. 3 Kindblade, SE SE SW section 20-21-1w, location; same company's No. 2 Huntsman, NE NE NW section 29-21-1w, location.

Rooks County

The only completion in Rooks County was a wildcat failure at Buckner & Schoff No. 1 McConnel, NE cor. section 34-6s-18w. It topped anhydrite at 1,418 feet; Kansas City lime, 3,163 feet; Siliceous lime, 3,536-42 feet, total depth, had a hole full of water and was abandoned.

C. R. Craft and others No. 1 Ziegler, NE NE SW section 8-10-16w, Rooks County wildcat, was building rotary rig.

Kingman County

Skelly Oil Co. No. 3 Interurban Realty Co., C SW section 30-27-10w, Cunningham area, Kingman County, topped Viola lime at 4,017 feet; Simpson, 4,098 feet; Wilcox sand, 4,109 feet; total depth, 4,154 feet; plugged back to 4,035 feet and produced 52,900,000 feet of gas.

Sedgwick County

Empire Oil & Refining Co. No. 1 Kimel, NW cor. section 4-29-2w, wildcat in Sedgwick County, had Kansas City lime at 2,655-3,250 feet; topped Chat at 3,648 feet; Simpson, 4,094 feet, and was dry and abandoned at 4,131 feet, total depth.

Chautauqua County

Denman Brothers No. 2 French, SW SW NE section 1-33-12, Chautauqua County, had Mississippi lime at 1,650 feet, was bottomed at 1,676 feet, and produced 900,000 feet of gas.

W. M. McKnabb, SW cor. section 11-32-10, Chautauqua County wildcat, topped Kansas City lime at 1,320 feet; Mississippi, 2,011 feet; had a hole full of water at 2,081 feet, total depth, and was dry and abandoned.

Three new tests in Chautauqua County were started. Barbara Oil Co. No. 2 Gorham, SW SE NW section 23-

(Continued on Page 102)

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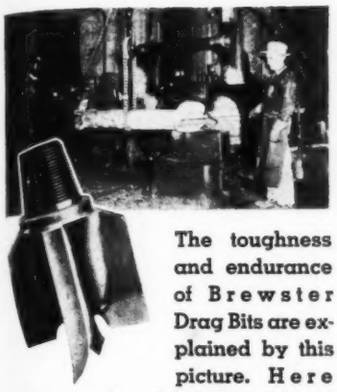

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The thick section of heaving shale overlying the Citrus Grove Prospect in Matagorda County, which has been a menace to drilling for years, apparently has been overcome by Loffland Brothers, who have established a new deep record for the Texas Coast by drilling Continental Oil Co. No. 2 Robbins to a depth of 10,550 feet. The shale was encountered first at around 6,300 feet at which point a protection string of 11¾-inch casing was cemented. Another string of 8⅝-inch was cemented at 8,912 feet and open hole has been successfully carried on down. Another rig is located at Shepherds Mott, in Matagorda County and two others in the Tepetate field for the same company. An important 2,200-foot southeast extension was marked up for the Charenton field by Pan American Production Co. No. 1 South Coast Development, which opened a deeper producing horizon when it showed pipe-line oil on a drill stem test at 7,923 feet. Other activity is reported in the Hastings and Amelia fields for the Stanolind Oil & Gas Co. In Coastal Louisiana two deep tests are being rigged up for the same company in Jefferson Davis Parish.

Smith & McDannald have abandoned Stanolind Oil & Gas Co. No. 1 United Life & Accident Insurance Co. in Jefferson Davis Parish at 9,942 feet. They have five rotaries operating for the Tide Water Oil Co. in the Long Lake and St. Martinsville fields and two others for the Pure Oil Co. in the Dickinson and Louise fields. In the meantime they are nearing the expected pay horizon for themselves at the Lakeview gas field in Wharton County and are coring for the sand in two wells at the South Houston for the Stanolind Oil & Gas Co.

Nicklos Drilling Co. has two rotaries in the Tepetate field in Acadia Parish for Continental Oil Co. At the Valentine field in Lafourche Parish for Pan American Production Co., a string of 7-inch casing has been cemented at 7,120 feet, preparatory to testing No. 4 Harang at 7,190 feet. Progress is being made on two other wells for the same company.

George Echols has moved in and rigged up for his No. 1 J. W. Woods in the Tomball field in Harris County. Four other active outfits are situated at the Flour Bluff field for Gem Oil Co., one at the Gillis field for Fohs Oil Co. and one at the Heyer field for himself.

Glenn H. McCarthy has cored sand in his No. 5 Longe and will run casing at the West Beaumont field. He is drilling two wells in the Amelia field for Humble Oil & Refining Co. Drilling activity in this latter field was increased the past week by the announcement of 12 more locations, all made by Humble Oil & Refining Co. The wells will be drilled by contract.

There were 40 new locations reported for the Texas Gulf Coast the past week, an increase of eight over the previous week. With the exception of a wildcat in the Garwood area in Colorado County by Coyle & Concord for No. 3-B Powell, all were field locations made in Hastings, Heyser, Anahuac, Dickinson, High Island, Silsbee, Goose Creek, Tomball, Amelia, Big Hill, Nome, Spindletop, Livingston, Segno, Placedo, McFadden, Clay Creek and Withers.

Fred Manning, president of Manning & Martin, Inc., has returned to Denver, Colo., headquarters from a business trip to Montana, where he signed up for two deep wells on the Badger Basin structure for Resolute Oil Co.

Day tour of O. W. Dyer crew on location in the northwest extension area of the Dickinson field, where preparations are being made to complete a second well for Atlantic Refining Co. C. C. Hickey, B. F. Wyatt, Clyde Hickey, Petty LaRue and H. P. Gaines

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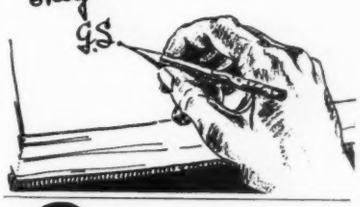

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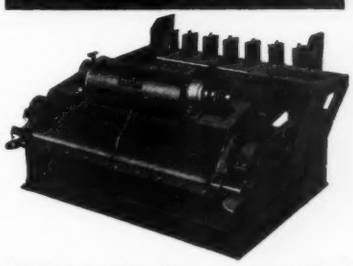

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BUSY SUMMER OF FIELD WORK NOW INDICATED IN KENTUCKY

By JAMES McINTYRE

OWENSBORO, Ky., May 3.—When some one opens an oil field in northwestern Kentucky lease owners in the newly discovered area lose no time in developing the pool to the point of completely defining it on all sides. That done there follows a lull in which there is a dearth of drilling until a lucky wildcatter opens another productive spot and the rush is resumed. The Livermore pool in McLean County, the most prolific area discovered in the past few years, was developed that way, and the Hardin pool, which stretches out along the McLean and Ohio County lines, and the Knobs pool in McLean County, which are among the recent discoveries in this part of the state were subjected to rapid development, but are still undefined. Just now there are only 35 wells drilling or preparing to drill in four counties, but this is an usually small number of operations which will be increased as soon as the results of the Ohio River's early spring overflow have completely passed away. A busy summer of field work is anticipated.

The Kentucky operator is not restricted by proration rules or limited as to well spacing "patterns" decided upon by corporation commission. Pay sands lay at depths ranging from 200 feet to 1,300 feet and wells cost from $1,000 to $6,000 to drill and put to pumping, so that high costs are not deterring factors and at $1.40 per barrel, and with a ready market the northwestern Kentuckian is well off—if he has production.

The Owensboro field is made up of many pools, small in area, but sometimes very prolific. The district is producing about half the oil being currently produced in the state and is the most active in Kentucky even now, with its unusually small number of wells drilling.

A round-up of completions covering reports received in the past three weeks from McLean, Hancock, Ohio and Daviess counties, along with some miscellaneous operations gives the following results:

Hancock County

In the Patesville district, Hancock County, Ray Cooper completed two wells on the W. C. Smith farm, and Nos. 11 and 12 Gordon & Lynch farm and is drilling No. 13 on the latter farm. Roy Baird completed No. 2 Jim Dunn. All the completions were Jett sand wells good for 10 to 15 bbls. a day in their early stages. In the Easton district, Hupp & Duff Nos. 1 and 2 Emma Falls, were rated between 50 and 75-bbl. wells initially, producing from Jackson sand, which lies about 150 feet lower than Jett sand. No. 3 Falls was drilling. J. C. Ellis completed Nos. 4, 5, and 6 Fuqua in Jackson sand, and Nos. 9, 10, 11 and 12 Richards, in Jett. sand. Thomas M. Galey was drilling No. 3 Jack Falls, and Chester Oil Co. was drilling No. 5 Vaughn. In the Pellville district Henry Vickers No. 2 Brown was completed as an oil well in the Barlow sand, which lies below the Jackson, and was drilling No. 3, also drilling No. 2 Mitchell Huff. McDonald Oil Co. drilled a 20-bbl. well in No. 4 J. W. Garrett. No. 5 Garrett was dry in Barlow sand and No. 6 was drilling. In the Floral district Cumberland Petroleum Co. got a commercial gas well at 515 feet on the Homer Remington farm, and was drilling No. 1 Powers. W. W. Damron was drilling No. 3 J. T. Brown, No. 1 Fuchs, No. 1 McJolley and No. 1 Sosh.

Ohio County

In the Whitesville district, Ohio County, Henry Vickers and others No. 5 M. J. Holbrook found the Barlow sand dry and was abandoned. In the Deanfield district Wade and James No. 2 H. and W. Phillips, was dry and abandoned, total depth not available. In the Friendship Church district South Penn Oil Co. was drilling on the Royal farm; F. J. Young and others had a showing of gas in No. 4 W. G. Evans; Chester Oil Co. has a location staked on the John McCarthy farm, and F. J. Young was drilling No. 9 Oscar Whitehouse. In the Dundee district DeHart and others completed Nos. 6 and 7 H. J. O'Dell as oil wells and are drilling No. 8. In the Heflin district Hunt & Evans Nos. 3, 4 and 5 Cameron heirs were oil wells initialling around 40 bbls. each from Jackson sand. Globe Oil Co. completed Nos. 16 and 17 R. Graham 130 acres, and Nos. 2 and 3 Jackson 12 acres, all three commercial producers. Western Kentucky Petroleum Co. was drilling No. 6 J. E. Mitchell. Carpenter and others completed a shallow gas well in No. 5 Mrs. S. Thomas and were drilling No. 1. Same operators completed a gas well on the J. A. Edge farm and four gas wells and three dry holes on the Bean farm. In the Adabird district Ogle No. 9 McGann was dry and abandoned. Chester Oil Co. was moving in to start No. 2 E. M. Howard. Globe Oil Co. got a commercial producer at 960 feet in No. 3 John Cameron. Schaffer and others were drilling No. 3 Joe Helm. Black and others had location staked for No. 2 Basil Taylor. Rex-Pyramid Oil Co. was drilling No. 12 Lynn Stinnett, after getting a Jett sand producer in No. 11 Stinnett. In the Taffy district J. C. Ellis Nos. 17 and 18 C. R. Keith and Nos. 11, 12 and 13 Hoagland were commercial producers in the Jett sand. No. 14 Hoagland was drilling. In the Buford district Dan McQueen No. 2 L. Patton was dry in Jett sand and was abandoned. In the Washington school district Sunflower Oil & Gas Co. completed a failure at 1,560 feet in a test on the D. R. Wooten farm. In the Heflin district Western Kentucky Petroleum Co. drilled a wildcat, No. 1 L. E. Pirtle, to 1,690 feet, and it was dry and abandoned. In the Fordsville district a number of key wells for repressuring Jett sand oil wells were completed recently, one by C. Vickers and others, No. 14 Sally Jones and four by Western Kentucky Petroleum Co. on the Hardin Miles and Adam Cole farms. Hoosier Drilling Co. No. 4 C. Mason was a gasser and No. 5 was drilling. Marhill Oil Co. No. 3 L. V. Oller, a shallow test, was dry at 562 feet. Mohawk Oil Co. No. 2 Betty Cullen 160-acre farm was a dry hole. Percival and others No. 1 N. A. Hibbs was dry and abandoned at 650 feet. Same operators No. 4 A. Burnett was drilling. In the Heflin district Taylor & Lyons No. 2 Love Basham was dry and abandoned in a broken lime formation, depth not available. Ellis and others were drilling No. 2 Hefner. Marhill Oil Co. No. 1 N. B. Hipsey was dry and abandoned. Two miles east of Livermore, in a Jett sand pool opened last year on the Hardin farm, which pool is on the Ohio and McLean County lines, Carpenter and others completed Nos. 1, 2 and 3 William Hardin heirs, Tract No. 1, the wells having been rated from 200 to 250 bbls. initially, and were drilling No. 4. Same operators also drilled Nos. 1 and 2 on Hardin heirs Tract No. 2, and got correspondingly good wells. Hupp and others on the Hackett Brothers land have five wells in the Barlow and Bethel sands good for 20 bbls. per well on an average, also two dry holes. Their No. 7 Hackett was a 200-bbl. well from Jett sand. Nos. 15 and 16 Hackett are drilling. J. C. Miller and others were drilling No. 2 Austin & Cullen. Hupp and others test on a tract of the Louisville Joint Stock Land Bank, a wildcat, was dry and abandoned at 1,500 feet. Carpenter and others were drilling No. 1 William Hardin 112 acres, and Hupp and others were drilling No. 1 L. W. Tichner. The Petroleum Co. Nos. 1, 2 and 3 Betty Cullen were good wells in the Jett sand. In the Heflin district Carpenter and others are testing out the Oscar James farm.

McLean County

The Livermore field, which was the busiest area in the state last year and early this year, is about drilled up. South of the field Cumberland Petroleum Co., after completing two producers, got a dry hole in No. 3 Butterfield. The Knobs area was opened as an oil field in 1935 and there are now 11 shallow and 22 deep wells producing oil; three deep gas wells and eight dry holes. It was opened with a producing well in a sand above the Stray sand at a depth of 490 feet. The shallow wells averaged around 20 bbls. per day initially. The deeper sand developed wells of 150 to 200 bbls. initial production from sand around 1,160 feet in depth, but some production was also obtained from the deeper Barlow sand. At present Cumberland Petroleum Co. is drilling No. 7 E. Knall 100 acres. Wickland Development Co. was drilling No. 1 Conrad. Bloom and others No. 1 C. L. Davis, an outside test, was dry and abandoned at 1,250 feet. Northwest of Livermore about 2 miles Stevenson and others test on the W. A. Brown farm was dry at 1,640 feet. In the Nuckols pool, 2 miles northeast of Livermore, W. W. Damron No. 1 A. H. Lee was dry at 1,722 feet. J. C. Miller and others No. 2 Snyder was drilling and their No. 7 Fannie Foley was a gas well. J. C. Ellis Nos. 6 and 7 Forrest Howard were dry holes, abandoned at about 1,350 feet. East of Livermore Clark & Snyder No. 3 E. E. Humphrey was a commercial producer at a total depth of 1,379 feet. Lyle and others No. 6 Ed Whitehouse was a dry hole. W. W. Damron No. 1 F. O. Kaufman was drilling. In the Grindstone Hill district Ohio Oil Co. No. 15 McManama tract No. 2, and No. 11 McManama tract No. 1, were commercial oil wells.

In Daviess County

In the Habit district Daviess County, Henry & Rose completed a gasser at 957 feet in No. 4 Dr. Kirk. In the Red Hill district Gibson & Aukney Nos. 3 and 4 A. E. Bryant were oil wells at a depth of about 965 feet. Washburn & Cox were drilling No. 4 Del Salmon. In the Whitesville district Stewart and others No. 2 Mrs. A. T. Ramsey was a failure. In the Pleasant Ridge district Marietta Oil Co. No. 1 Tinsley was dry and Gibson & Aukney were drilling No. 1 D. Taylor.

Deep Tests

Imperial Oil & Gas Co. are drilling a deep test west of Slaughter, in Webster County, and South Penn Oil Co. will drill a deep test 3 miles southwest of Island in McLean County. It is expected to penetrate the Corniferous limestone which is found in that general area from 3,400 to 4,000 feet.

ASHLAND, Ky., May 3.—The eastern Kentucky field, which includes 14 counties in which oil or gas, or both, are produced, is one of the oldest oil areas in the country, but is not too old to have an occasional discovery. The Kentucky-West Virginia Gas Co. opened a new oil-producing spot recently while drilling for gas in Martin County. Its No. 1 Preece, on Coldwater Creek in Martin County, was a gas well but No. 2 came in for 25 bbls. initial oil production from Maxton sand at around 1,165 feet, and in the past week No. 3 was completed with an initial record of 60 bbls. from the same sand. Ashland Oil & Transportation Co. will take the production for Ashland Oil & Refining Co.'s refinery.

Oil is found in eastern Kentucky at depth from 100 feet down to 2,100 feet. Gas sands are found at greater depth, down to 3,600 feet. There is more drilling for gas than for oil. During April Warfield Natural Gas Co. had a program of 17 drilling operations scattered in Knott, Martin and Floyd counties; Inland Gas Co. five operations started in Knott County; Southeast Gas Co. two wells drilling in Martin County, while miscellaneous operations in Magoffin, Morgan, Johnson, Martin, Knott and Floyd counties brought the program, with gas as the main objective, up to a total of 42 operations. In addition to this the search for oil continues and a campaign of repressuring, cleaning out and reconditioning old wells has become an important part of development work in the general district.

In the Wagersville district in Estill County, from 35 to 40 wells have been completed in a sand 100 feet in depth. The wells averaged about 5 bbls. but ran as high as 30 bbls. initial production. These wells were drilled at a cost of about $300 each, making them quite profitable. Ten wells were drilling at last report in the same area. C. D. Ullum of Indianapolis, Ind., and the Wittmer interests of Pittsburgh, Pa., are prominent operators in Estill County.

In Lee County, South Penn Oil Co. so far this year completed half a dozen wells on the Flahaven tract, in the Big Sinking Creek area, the latest averaging about 20 bbls. initially from sand around 800 feet in depth. Price Fraley and others just finished No. 1 Andrew Combs in the Billy's Fork district, good for 50 bbls. initially, and were drilling No. 2. Troy Oaks and others were drilling a test on the same Combs farm. Petroleum Exploration has had good success developing the Gourley lease in the Ida May district, and No. 12 Gourley, a current completion, started at 75 bbls., at a total depth of 900 feet.

In Powell County local parties are drilling half a dozen wells in the Pilot and Rogers Chapel districts where pay sands lie at from 800 to 1,000 feet.

(Continued on Page 104)

Texas and Louisiana Gulf

WILDCAT TEST POINTING TO NEW TYLER COUNTY FIELD

By
F. L. SINGLETON

HOUSTON, Tex., May 3. — The Gulf Coast district experienced an eventful week. Of particular importance was the indicated discovery of a new field in Tyler County, where a wildcat showed several hundred feet of pipe line oil on a drillstem test. Discovery of deeper producing horizons in the old Fannett field in Jefferson County and in the Charenton field in St. Mary Parish, Louisiana, were other developments. Running of a record string of casing was reported in a wildcat test in Terrebonne Parish which has shown possible production from a 12,000-foot horizon. Assurance of important extensions was seen in several fields throughout the district.

Republic Production Co. and Houston Oil Co. No. 2 Hurd, eastern Tyler County, was completed Sunday and is flowing an estimated 450 bbls. of pipe-line oil a day while cleaning into the pits through a quarter-inch choke with tubing pressure 875 pounds. The oil tested 41 gravity and the well is producing from a screen setting at 7,621-41 feet, the total depth.

The well is situated 3,700 feet northwest of No. 1, a dry hole recently abandoned at 8,047 feet. Although no geological information has been released on the well, it is believed to have made its showing from the Queen City or Wilcox formation. If this proves true there will be a new trend play throughout the northern tier counties, generally referred to as the Conroe trend. This particular area has been held jointly by the two companies for several years and numerous tests have been drilled with only one productive. This well, No. 1 Sterne, a wet gasser, is producing from the Cockfield sand, around 4,600 feet.

Interest in Fannett Revived

Interest in the Fannett field, Jefferson County, was revived by completion of Gulf Oil Corp. No. 7 Junker for an initial production of 691 bbls. of pipe-line oil a day through a quarter-inch choke, with tubing pressure 750 pounds and casing pressure 1,075 pounds. Gravity of the oil tested 30.3. The well was scheduled to be a 10,000-foot test, but was stopped at its present depth after topping broken sand showing oil at 6,535 feet, which was cored to a total depth of 6,612 feet (corrected by steel line measurements). Nine and five-eighths inch casing was cemented at 6,009 feet.

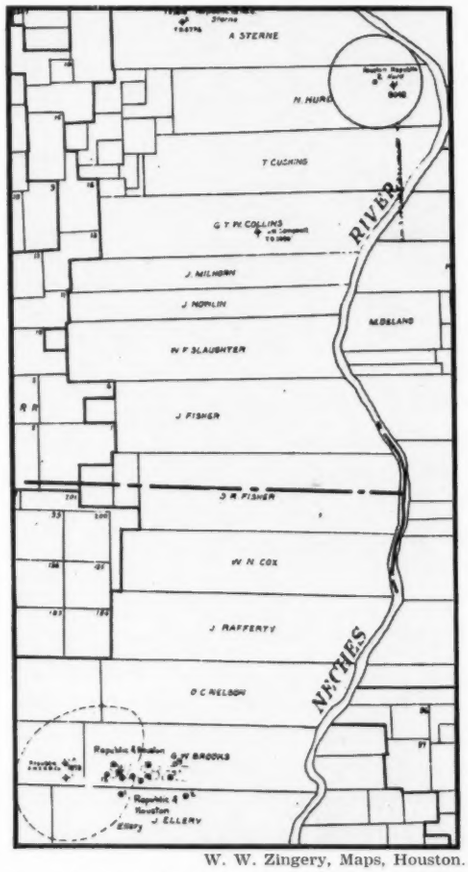
It is the first deep test drilled in the field. It is located on the south flank of the dome, just south of No. 6 Junker a shallow producer. Production on the dome has been from depths ranging from 3,000 to 5,000 feet and with the completion of No. 7 Junker, a revival of drilling is expected. There are 18 producing wells in the field having a daily average production of 550 bbls.

In the Silsbee field, Hardin County, Republic Production Co. and Houston Oil Co. No. 9 Brooks assured the field of an 1,800-foot north extension when it tested 50 pounds of working pressure and 660 feet of pipe-line oil with no salt water on a drillstem test at 6,905-15 feet, the total depth. The lower sand was topped at 6,906 feet and 7-inch casing was cemented at 6,906 feet. Same company's No. 12 Brooks, 933 feet west of No. 3, topped sand showing oil at 6,834 feet and cored to a total depth of 6,845 feet. Seven-inch casing was cemented at 6,824 feet. Locations were made for Nos. 13, 14 and 15 Brooks.

One mile southwest of production of the Lockridge field, Brazoria County, Gulf Oil Corp. No. 1-A Wood, across the Brazos River in the Thomas Alsberry Survey, made a drillstem test at 6,376-86 feet. It tested 6,300 feet of pipe-line oil and 86 feet of salt water and 175 pounds of pressure through a one-quarter inch choke on top and a three-eighths inch choke on bottom. Nine and five-eighths inch casing was cemented at 6,374 feet. While the well no doubt will make a good producer, it is considered an edge well due to the salt water showing. The elevation of the well is 60 feet while the Shell No. 2 Ramsey well to the east is 52. This gives No. 1-A Wood a subsea water level of 6,326 feet compared with a subsea water level in the Ramsey well of 6,325 feet. The latter well showed pipe-line oil with salt water at 6,390 feet, but was plugged back and completed for a good producer at 6,372 feet.

Field Apparently Extended

The Segno field, Polk County, was apparently extended to the west by Laquinta Oil Co. No. 1 Wing, which cored 2 feet of oil sand at 5,176-94 feet and 5 feet of oil sand at 5,194-99 feet, the total depth. Eight-inch casing was cemented at 5,182 feet. The Cockfield was topped at 5,101 feet, placing it several feet higher on the structure than the producers to the east. West of the field about a half mile, Humble Oil & Refining Co. abandoned No. 1 Kirby Lumber Co. after it showed 41 thribbles of salt water with a slight show of oil at a plugged-back depth, through perforated casing at 5,192-93 feet. Same company is moving in material for No. 1-B Kirby, about 5,000 feet southeast of the dry hole in the M. Victor Survey.



W. W. Zingery, Maps, Houston.

Complete circle shows new field in Tyler County. Silsbee field to south indicated by broken circle

The northern section of the Turtle Bay field, Chambers County, was apparently extended 2,000 feet to the west by Stanolind Oil & Gas Co. which is running 7-inch casing at No. 1 Silva. Several feet of oil sand was cored to a total depth of 6,614 feet. The well is in the Shadrack Burney Survey and is checking normal with No. 1 Iola Mae White to the east.

The south extension area of the Cotton Lake field, Chambers County, registered its second good producer by completion of Salt Dome Oil Corp. No. 1-D Lawrence. It flowed 431 bbls. of pipe-line oil a day through a quarter-inch choke with tubing pressure 800 pounds and casing pressure 1,100 pounds. Production is through perforated casing at 6,525 feet. This well is 932 feet west of No. 1-C in the S. Barrow Survey.

Another producer for the Way area, 1 mile northwest of the Dickinson field proper, in Galveston County, was assured by Atlantic Oil & Refining Co. No. 1 P. C. Roberts. Sand and shale showing gas were topped at 8,011½ feet. Sand showing oil was cored at intervals from 8,102 feet to the total depth of 8,134 feet, and 7-inch casing is being cemented. The well is a south offset to the company's No. 1 Anderson in the P. G. Merrett Survey. The Flat Marginulina was topped at 7,270 feet and the Frio at 7,824 feet. To the south, in the Gillock area, two wells were scheduled to be completed. Coast Petroleum Co. No. 6 Maco Stewart, 933 feet west of No. 5 in the W. K. Wilson Survey, topped the Frio at 8,185 feet. It cored sand and shale showing oil to 8,854-74 feet, the total depth, and 6⅝-inch casing was cemented at 8,833 feet. Humble Oil & Refining Co. No. 18 Stewart topped the Frio at 8,300 feet and is preparing to cement casing after coring sand showing oil from 8,559-8,931 feet. Bottom of the hole is 8,936 feet.

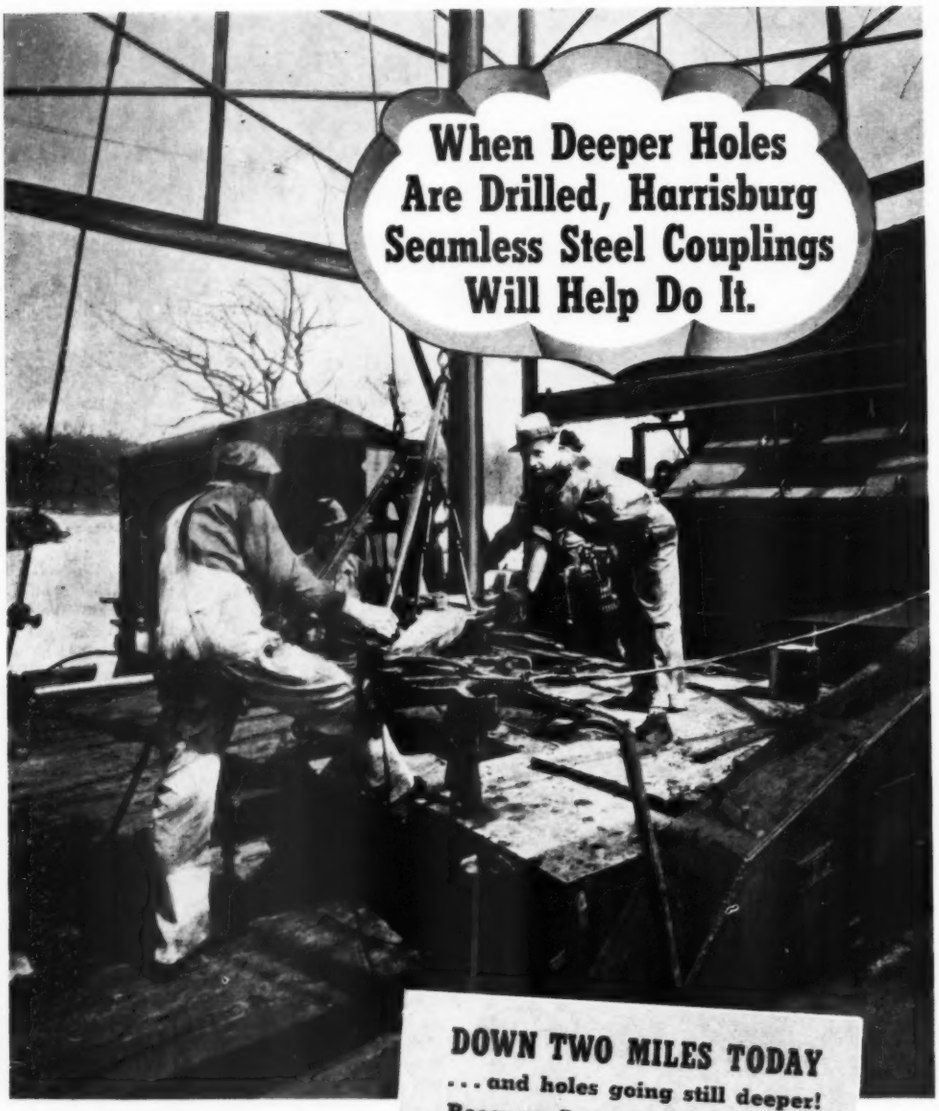
Gas Retards Completion

Excessive gas pressure continues to retard completion of Stanolind Oil & Gas Co. No. 1 Oates, 4,150 feet south of the discovery well in the Clinton field, Harris County. In attempting to lower the pressure and plug off the salt water flow by cementing below the drillpipe the mud pumps began bucking at 4,000 pounds and held this pressure, which left cement in the 3-inch drillstem 2,200 feet from the top of the cement plug. The pressure was released and it is the opinion of the operators that some of the cement was pumped on bottom.

To the northwest in the Aldine area, Texas Gulf Producing Co. No. 1 Gillespie & Garnsey, which has been in process of completion for the past several weeks, has been shut down and may be plugged back, sidetracked and redrilled to the sand at 7,098-7,100 feet, at which point it has been tested through perforated casing and has shown some oil and gas along with salt water. In the same area and located in the Ehrhardt, Superior Oil & Gas Co. has rigged up on No. 1 Bentler in the southwest corner of a 785-acre tract.

The first commercial production from a 12,000-foot horizon is a possibility as Humble Oil & Refining Co. successfully cemented 12,101 feet of 7-inch 28-pound casing at No. 1 Ellender, on the north flank of the old Houma gas field in Terrebonne Parish, Coastal Louisiana. Several sections of sand with an oil and gas odor have been encountered and it is probable that the well will be tested without drilling deeper, as electrical logging surveys have shown good indication at its present depth. This is said to be the longest string of casing ever run, and the hole is the third 12,000-foot test drilled along the Louisiana Gulf Coast during the past 18 months. Its present depth is exceeded by Continental Oil Co.'s 12,216-foot hole in Vermilion Parish and Gulf Oil Corp. No. 103 McElroy in Crane County, which was drilled to 12,786 feet.

A new producing horizon for the Charenton field, St. Mary Parish, has been opened by Pan American Production Co. No. 1 South Coast Development Co., 2,200 feet southeast of the discovery well, which is producing through perforations at 7,198-7,203 feet. The new sand, topped at 7,908 feet, was cored to a total depth of 7,923 feet, at which point a drillstem test was made, showing 1,000 feet of 34.6-gravity oil in five minutes through quarter-inch chokes. Seven-inch casing was cemented at 7,906 feet. The well is located south of the Bayou in section 30-13s-10e. Same company's No. 3 Lawes, in sec-



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tion 25, is coring in shale below 8,252 feet and apparently has missed this new sand.

Test Checks Favorably

On the Pine Island Prospect, 12 miles north of Starks in Jefferson Davis Parish, Louisiana, Crusader Oil Co. No. 1 Langley is drilling in sandy shale below 7,038 feet and is reported to be checking favorably. The Discorbis was topped at 6,250 feet and the Heterostegina from 6,460-90 feet. The test is approximately midway between the China Prospect, where a Stanolind Oil & Gas Co. well recently blew out, and the Tepetate field in Acadia Parish.

A shallow sand for the west flank of the old Jennings field, Acadia Parish, was discovered by S. Rhodes No. 1 Iowa Jennings, which recovered 20 stands of pipe-line oil on a drillstem test through perforations at 3,628-42 feet. The test was drilled for the deep sand, but is being tested at its present depth after encountering the salt at 3,899 feet and drilled to 3,916 feet. Approximately 1 mile northeast Lake City Oil Co. No. 2 Jennings-Syndicate tested salt water through perforations at 4,233-48 feet and is making a second test from 4,198-4,223 feet. On the southeast flank, Stanolind Oil & Gas Co. No. 18 Houssiere Latrelle, in section 47, tested 1,700,000 feet of dry gas from a screen setting at 7,005-72 feet and is expected to be worked over.

Jefferson Lake Oil Co. No. 414 State Lake Pigneur, on the Jefferson Island salt dome, Iberia Parish, cored into salt at 7,059-60 feet and has been plugged back to 5,500 feet, preparatory to sidetracking and redrilling to 6,900 feet, where it showed for a commercial well several weeks ago.

On the East Hayes Prospect, Jefferson Davis Parish, Stanolind Oil & Gas Co. has abandoned No. 1 United Life & Accident Insurance Co. in salt water sand at 9,942 feet. The Discorbis was topped at 9,062 feet and the Heterostegina at 9,656-80 feet.

Texas Co. No. 1 Bayou Sale on the Wax Lake Prospect, St. Mary Parish, is drilling in shale and lime below 11,768 feet with no shows reported. Location is in section 23-17s-9e.

On the Timbalier Bay Prospect, LaFourche Parish, Gulf Oil Corp. is moving in material for No. 3 State, 1,425 feet from the north line and 1,500 feet from the east line of section 36-23s-21e.

California Fields

(Continued from Page 78)

Co. and other operators including Union Oil Co., Continental Oil Co., Standard and Tide Water Associated Oil Co. Belridge Oil Co. is drilling three wells and Tide Water Associated and Continental one each.

Greeley

Standard Oil Co. has abandoned No. 14-1 Kern County Land in the southern part of the Greeley field of Kern County as a duster at 8,302 feet. This outpost, in section 4-30-26, was found beyond the productive limits. In section 20-29-26, the company has plugged back No. 11-2 Kern County Land from 8,339 feet to 7,768 feet to test upper showings. No. 11-5 in section 19-29-26 was spudded in a short time ago and preparations are under way to begin drilling on No. 11-4 in section 20-29-26. Mohawk Oil Co. outpost in the northern part has reached 8,240 feet but has not yet logged the pay anticipated. Ohio Oil Co. wildcat about midway between the Greeley and Ten Section fields in section 6-30-26 is scheduled to begin making hole within a few days.

Ten Section

The Ten Section field discovered by Shell Oil Co. is rapidly taking on the appearance of an active oil field as Shell, which appears to control all of the potential acreage, has completed four excellent wells and has another, No. 23-A in section 30-30-26, just about ready for a production test. Production of this field is being severely curtailed in conformity with the proration program. No. 58-A Kern County Land in section 29-30-26 is expected to be the next well started by Shell as the rig was finished some time ago. Signal Oil Co. No. 1 Kern County Land in section 21-30-27, an outpost, has reached 8,350 feet without finding the pay and an early abandonment is expected unless the hole shows an improvement soon. The joint test of Superior Oil Co. and Union Oil Co. in section 11-30-26 is the deepest well drilled in this area as it is down 11,331 feet. This well, which has not yet found anything resembling production, is rapidly approaching the California record for depth established by General Petroleum Corp. No. 1 Berry in the South Belridge field of Kern County suspended a few years ago at 11,733 feet.

North Louisiana, Arkansas

EXTENSIONS AND LOCATIONS POINT TO GREATER ACTIVITY

By MITCHELL TUCKER

SHREVEPORT, La., May 3.—Important extensions, completions and new locations in many active fields in the Ark-La-Tex area last week pointed to increasing activity. The May allowable for North Louisiana was set at 73,500 bbls. daily by the state department of conservation. Rodessa was allocated 50,000 bbls. and Lisbon 1,000 bbls. Remaining fields were given 22,500 bbls.

Rodessa Field

Bottom-hole pressure on the Louisiana side of the Rodessa field declined 42 pounds during the 31-day period ending April 1, an average of 1.35 pounds daily, according to figures released by the Rodessa operators committee. This is in contrast with an average daily drop of .39 in February and March, and 1.83 in January. The current increased drop in pressure may be explained partly by the fact that former key wells in the Hill horizon were discontinued, and all key tests now are made in either the Gloyd, Dees or Young sands.

Ten wells on the Louisiana side of the field are now pumping or agitating with beam equipment, while 10 others are on gas lift. Phillips Petroleum Co. is preparing to make some electrical pump installations in the eastern portion of the field, where large salt-water volumes are being handled.

Present interest in Rodessa is divided among five deep tests of lower horizons; an important extension to the northeast toward Ida, La.; remedial work being done to reduce gas-oil ratios; and promise of more locations in the 12-mile semiproven extension area in Marion County, Texas.

Deep Tests—Rodessa

The Marr & Perkins No. 5 Hunter, deep test near the peak of the Rodessa structure in section 13-23-16, proved disappointing last week. After drilling to a total depth of 7,207 feet and running Schlumberger, it was decided to plug the hole back to the Pettit zone, acidize and test the 9-foot section of 16 per cent porous Oolitic lime, which showed oil from 6,545-55 feet while deepening. The hole was cemented back to 6,600 feet, 5-inch casing set at 6,510 feet, and a 3,000-gallon acid charge applied. Swabbing and testing after acidizing yielded salt water with slight shows of oil. Operators have announced they will plug the hole back to its former producing level, the Young sand, lowermost member of the Rodessa series.

South of the oil production in the gas part of the field R. W. Norton No. 1 Payne, SE SE section 27-23-16 ran and cemented 7-inch casing at 9,454 feet. This test has been credited with several attractive showings above that depth, but no official announcement has been made as to whether pipe was set to protect the hole in going deeper, or in preparation to test. Active leasing and royalty trading have accompanied this move.

About one-half mile south of Rodessa's oil discovery well the United Gas Public Service Co. No. 5 Young, section 21-23-16, topped the Travis Peak at 6,592 feet and continued coring at 6,690 feet in search of possible saturation in upper sand or lime members of this section.

In the Cass County portion of the field, Magnolia Petroleum No. 11 J. E. George, John Collum Survey, topped the Pettit (basal Glen Rose) at 6,434 feet and found this lime tight and dry. Drilling continued at 6,582 feet after drillstem test from 6,565-82 feet showed salt water only.

In the Jacob Carsser Survey the same operators topped Travis Peak at 6,662 feet in No. 1 Harper & Thatcher, and found small showings of oil in sand from 6,590-97 feet. This hole was plugged back to 6,075 feet, and is waiting for orders.

Marion County—Rodessa

Arkansas-Louisiana Gas Co. No. 1 Laura McIntosh, important test in the William Edminston Survey, topped the Dees sand at 6,098 feet and found it unsaturated. The Young oil sand, prominent in the Rodessa field proper, was missing at this location. The bit went into black shale at 6,120 feet, which is presumed to separate the Dees and the Pettit lime. Operators continued to core at 6,455 feet in search of the Pettit formation.

Offsets to the Jefferson discovery well in Marion County by both the Shell and Gulf companies are expected soon. Permits were granted for additional wells in the townsite of Jefferson, but no actual work has been started there.

Remedial Work—Rodessa

The Rodessa field is the scene of a wide variety of remedial work to reduce gas-oil ratios to conserve reservoir pressure and gas reserves, and to conform with the allocation order which imposes a gas limit factor of 2,000 to 1 on all individual well allowables. The use of 1¼-inch flow strings, bottom-hole chokes of various types, and flow-valves is proving helpful. There are about 15 wells either reconditioning or scheduled for workover to reduce ratios. Such work will include plugging back, squeeze jobs on gas and water sands, etc.

Eastern Extension—Rodessa

Lion Oil Refining Co. threw renewed interest in the northeastern edge of the Rodessa field by completion of its No. 1 Holm, NW SE SE section 9-23-15, which flowed 26 bbls. hourly on initial test through one-half inch tubing choke, casing pressure 750 pounds, total depth 6,042 feet. Additional locations nearby are expected in this portion of the field, which had been rather inactive.

Slightly south and west of the Lion's eastward extension, Lyons & Neely completed two gas wells in section 8-23-15. No. 1 Noel, at total depth of 6,060 feet, gauged 3,750,000 feet, tubing pressure 1,500 pounds. Their No. 2 Noel gauged 3,000,000 feet through one-quarter inch tubing choke, 2,100 pounds tubing pressure, total depth 5,930 feet.

Rodessa Completions

Two completions were made last week in the North Rodessa sector. Gulf Refining Co. No. 1 Campbell, section 4-23-16, flowed 171 bbls. daily through one-quarter inch choke, casing pressure 925 pounds, total depth 6,050 feet. J. Edward Jones No. 4-A Sharp, C section 4-23-16, flowed 80 bbls. a day on initial test through 35/64-inch tubing choke, casing pressure 650 pounds, total depth 6,047 feet.

R. W. Norton No. 4 Starke, SE quarter section 17-23-16, flowed 24 bbls. hourly through one-quarter inch tubing choke, casing pressure 1,100 pounds, total depth 5,918 feet.

In the Cass County, Texas, portion of the field Magnolia Petroleum Co. completed No. 13 J. E. George, John Collum Survey, flowing 10 bbls. hourly through one-eighth-inch tubing choke, total depth 6,080 feet. Same operators No. 11 L. Haywood, John Collum Survey, flowed 17 bbls. hourly through one-quarter inch tubing choke, casing pressure 825 pounds, total depth 5,952 feet.

No. 13 L. Haywood, same survey, flowed 580 bbls. in 24 hours through one-quarter inch tubing choke, total depth 5,978 feet.

Texas Co. No. 7 Rambo, Cass County School Survey, flowed 720 bbls. daily through one-half inch tubing choke, total depth 6,022 feet.

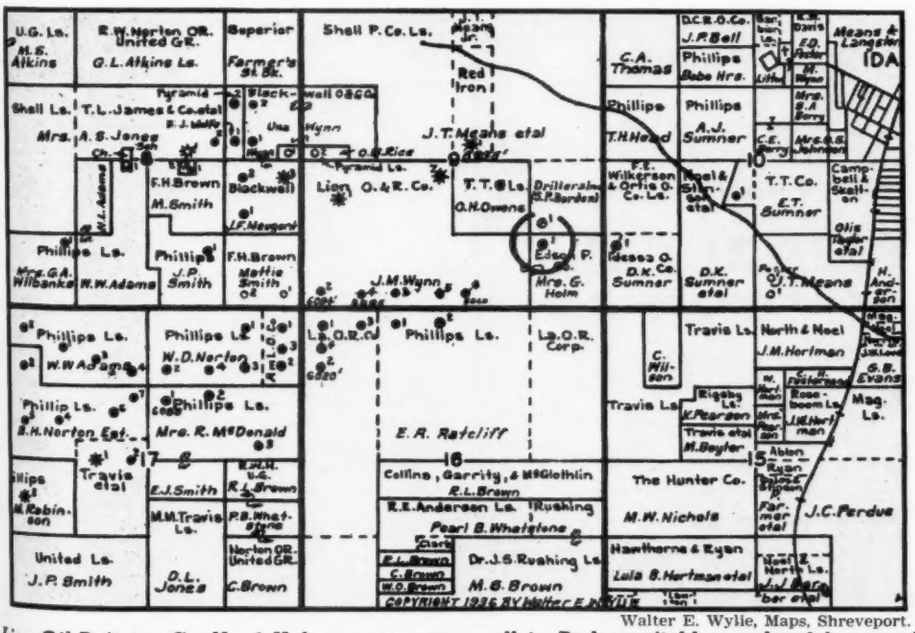
United Production Co. No. 1 V. Bivens, John Collum Survey, flowed 6 bbls. hourly through one-quarter inch tubing choke, total depth 5,940 feet.

Vaughn Production Co. No. 1 Willis, S.F.I.W. 1,263 Survey, flowed 17 bbls. hourly through 1-inch tubing choke, after 2,000-gallon acid charge, total depth 5,987 feet.

Bossier Parish

The Bellevue field reported one completion for the week, Premier Investment Co. No. 7 Weave, NW SE NW section 14-19-11, pumping 10 bbls. a day, total depth 425 feet.

Haynes Drilling Co. No. 1 A. J. Murff, NE SE section 35-17-12, about 1 mile south of oil production on the southwestern flank of the old Sligo gas field, and proposed as a deep flank test to the south, was aban-



Walter E. Wylie, Maps, Shreveport.

Lion Oil Refining Co. No. 1 Holm, easternmost well in Rodessa field completed last week

doned last week after drilling to a total of 6,112 feet. The Pettit lime (producing zone at Sligo) was topped at 5,315 feet and carried only a show of oil, gas and water. The Travis Peak was topped at 5,604 feet, and drilling continued to total depth of 6,112 feet without logging saturated sands in the upper part of that section. A string of 7-inch casing was run and cemented at 4,558 feet to permit testing of upper zones, but perforations from 4,427-36 and 4,454-64 feet proved productive of salt water only, and this southern flank test at Sligo was plugged and abandoned.

Caddo Parish

Bayou State Oil Corp. completed its No. 5 Brown, SW SE NE section 28-22-15, as a 260,000-foot gasser, total depth 949 feet. This company's lubricating oil refinery at Hosston will utilize the gas for fuel purposes.

DeMaggo and others No. 1 Huckaby, SE NE SW section 26-22-16, flank test of Caddo field, was abandoned at 2,200 feet after all sands to that point yielded salt water only.

W. D. Chew, independent Shreveport operator, completed one producer and one dry hole last week in the Caddo-Pine Island field. No. 1-D Levee Board pumped 18 bbls. daily, total depth 1,683 feet, plugged back to 930 feet. No. 4 U. S. Government, in section 5-20-16, found salt water only at total depth of 949 feet, and was abandoned.

Stanolind Oil & Gas Co. No. 11 J. B. Slattery, NE NW section 27-21-15, routine completion in Gilliam field, pumped 20 bbls. daily, total depth 1,580 feet.

Lisbon Field—Claiborne Parish

As the week closed, seven of the 18 wells now drilling at Lisbon had set oil string and were preparing to drill plug and bring wells in. Six wells are proven for production here.

In the recent order on the Lisbon field issued by the state department of conservation, proration was set up on a 75 per cent bottom-hole pressure basis and a 25 per cent acreage basis. A 20-acre spacing rule was imposed, but wells on smaller tracts may be drilled with special permission. May field allowable has been set at 1,000 bbls.

Gulf Refining Co. is rushing construction of its gathering system in the Lisbon area, which will feed to its 11-mile 6-inch branch connecting to the El Dorado-Homer-Port Arthur line.

DeSoto Parish

Grogan Oil Co. No. 1 Ramsey, section 36-11-11, which blew out and began flowing some oil after abandonment at 3,027 feet, was cleaned out to bottom preparatory to testing when drillpipe stuck and an impossible fishing job resulted. The operators junked the well last week, announcing intention to skid rig 150 feet and drill a new hole.

Vaughn Production Co. No. 1 Sample, SW NE SE section 24-11-14, once highly regarded as a possible field opener, has been abandoned at total depth of 5,930 feet, after showings in the Lower Glen Rose failed to yield commercial production.

LaSalle Parish

One completion and two dry holes were reported in the shallow Urania field last week. Air Lift Oil Co. No. 12 Urania, section 18-10-2e, pumped 60 bbls. daily, total depth 1,508 feet. T. & J., Inc., No. 1 Urania was abandoned at 1,598 feet as a dry hole. Urania Oil & Gas Co. No. 1 Urania, NW cor. section 7-10-2e, was also abandoned as dry, total depth 1,555 feet.

Sabine Parish

W. G. Ray Drilling Co. No. 3 Looney, NW SE NE section 30-9-13, failed to make a producer after acidizing at total depth of 2,111 feet and has been abandoned.

Webster Parish

Standard Oil Co. of Louisiana recompleted its No. 1 E. Fudicker, NW cor. section 2-17n-9w, situated about a mile south of the Sibley gas-distillate area, gauging 31,000,000 feet of saturated gas, closed-in pressure 2,350 feet. This hole was drilled originally to a total depth of 7,202 feet for a test of the upper Travis Peak sands, but was plugged back and completed in the Sibley horizon (Lower Glen Rose) by perforating 7-inch casing from 5,422-5,520 and 5,655-88 feet.

ARKANSAS

Hempstead County

E. H. Moore, Inc., of Tulsa, has staked location for No. 1 Porterfield, NE cor. E half SE section 21-14-25, a wildcat test on a 6,000-acre block about 20 miles northeast of Texarkana.

Nevada County

Berry Asphalt Co. No. 2 J. Haynie, NE SE SW section 6-14-20, was a routine completion in the Troy field pumping 35 bbls. of oil and 10 bbls. of water in 24 hours from the Nacatoch sand, total depth 1,239 feet.

W. B. Waller No. 1 Mendenhall, SE NW SE section 1-14-20, northern flank of the Troy field, was abandoned at a total depth of 2,313 feet ,after finding both the Nacatoch and Tokio sands dry.

Union County

Production from the discovery well at Schuler is being sustained at over 300 bbls. daily, while three offsets are either drilling or rigging up.

The Alice-Sydney Oil Co. No. 1 Morgan, NW NE SE section 18-18-17, is the most recently announced location. It is rigging up after setting surface casing at 194 feet. The two other drilling wells here, one by Marine Oil Co. and the other by Lion Oil Refining Co., are rapidly drilling ahead and promise further indications of Schuler's potentiality within the next three of four weeks.

Six miles north of Junction City H. C. Detrick is below surface casing on his No. 1 Robbins, section 12-19-16, which he plans to drill to the Schuler producing horizon.

EAST TEXAS (Border Counties)

Cass County

About 14 miles north of Rodessa, J. G. Puterbaugh and others No. 1 Doorley, Calloway Davis Survey, is drilling at about 4,500 feet and is reported to be running high and checking closely to shooting picture which prompted the test.

Panola County

Glassell & Glassell have staked location for their No. 1 Pierce and Chesbro, Julia Soape Survey, which will be a Lower Glen Rose test southeast of the operators' two gas and distillate producers in Panola County, from which United Gas Public Service Co. is taking

(Continued on Page 102)

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Rocky Mountain Area

By
T. R. INGRAM

HOBBS EDGE WELL SHOWING AS 16,000 BARREL PRODUCER

DENVER, Colo., May 3.—A third test in the foothills west of the old Boulder field in Colorado is being started by the Boulder Producing & Refining Co. Texas Co. and California Co. are preparing to let contract for a deep rotary test to the Sundance on the Wilson Creek structure in Rio Blanco County. South Park Oil Co. will stop to test shale production in its Hartsel well.

Stanolind Oil & Gas Co. is beginning the development of the Tensleep horizon in the Salt Creek field in Wyoming in which a well drilled in 1930 made 1,949 bbls. first 24 hours. Continental Oil Co.'s entrance into the East Lance Creek district is attracting attention. Ohio Oil Co. will deepen two of its old Lance Creek wells to the basal Sundance. One new location was made in Lance Creek. Resolute Oil Co. has let contract for two deep wells on the Badger Basin structure in Park County, both of which will go to 8,500 feet and one possibly several hundred feet deeper. Mountain Fuel Supply Co. has resumed drilling in South Baxter Basin.

The Cut Bank field in Montana had one failure, one completed oil well and two new operations. The Kevin-Sunburst field had no completions, but several new wells are getting under way.

NEW MEXICO

One of the big producers of the year in southeast New Mexico was near completion on the southeast edge of the Hobbs field, Lea County. It was Stanolind Oil & Gas Co. No. 7-X Thorpe, section 18-19-37. It had pay at 4,083 feet, was bottomed at 4,201 feet in lime, and flowed at the rate of 16,135 bbls. of oil daily, with gas gauging 1,700,000 feet. It had not been officially reported as a completion.

Gulf Oil Corp. No. 12-C Arnott-Ramsey, C NW SE section 21-21-36, Eunice area, topped pay at 3,795 feet and was completed at 3,885 feet, total depth. It flowed 420 bbls. of oil in six hours through tubing. Another Eunice completion of the week was Atlantic Refining Co. No. 5-L Catron-State, C NW NW section 3-21-36. It found pay at 3,825 feet; total depth 3,845 feet; was acidized and flowed 63 bbls. of oil daily, through tubing.

In the Monument field, Amerada Petroleum Corp. No. 4 Phillips, C NW NE section 1-20-36, flowed 218 bbls. of oil naturally in eight hours 45 minutes through 1-inch choke; and later flowed 130 bbls. in 2½ hours. It had pay at 3,822 feet and was bottomed at 3,900 feet. Gulf Oil Corp. No. 3-F Bell-State, section 36-20-36, had pay at 3,750 feet; total depth 3,849 feet; flowed 131 bbls. of oil through tubing in 12 hours; acidized and flowed 134 bbls. in eight hours. Same company's No. 1-G Bell-State, section 13-20-36, topped pay at 3,773 feet, was bottomed at 3,875 feet, acidized and flowed 283 bbls. of oil in 5½ hours through tubing. Phillips Petroleum Co. No. 1 Edna, C NW NW section 30-20-37, flowed 239 bbls. of oil in 15 hours through tubing after second acid treatment. Production was from pay topped at 3,726 feet; total depth 3,850 feet. Repollo Oil Co. No. 4 Byrd, section 11-20-36, had pay at 3,790 feet; total depth, 3,901 feet; and flowed 401 bbls. of oil through choke in 24 hours naturally.

In the Skelly, or Sims area, Texas Co. No. 1 Falvy, C NE NW section 8-22-37, had pay at 3,730-50 feet, total depth, was shot and flowed 104 bbls. of oil through tubing in 24 hours.

Ohio Oil Co. No. 5 State-McDonald, C SE NW section 16-22-36, said to be the deepest well ever drilled in New Mexico, stopped at 6,202 feet, total depth, with sulfur water intruding. It was plugged back to 3,890 feet, shot and flowed at the rate of 20 bbls. of oil an hour through choke. Top of pay was 3,730 feet.

Eppenauer Drilling Co. No. 1 Stuart, section 22-25-37, flowed 500 bbls. of oil naturally through tubing in 24 hours and was completed at plugged back depth of 3,398 feet. It had pay at 3,295 feet, and had a hole full of sulfur water at 3,410 feet, total depth.

Culbertson, Irwin & Stovall No. 3 Stuart, NE SE SW section 10-25-37, had pay at 3,315 feet; was bottomed at 3,415 feet, and flowed 300 bbls. of oil in 24 hours after a shot.

Gulf Oil Corp. No. 1 Carson, section 28-21-37, had pay at 3,670 feet; total depth, 3,780 feet; acidized, reacidized and flowed 104 bbls. of oil through tubing in 24 hours.

J. L. Perry No. 1 Elliott, SE cor. section 19-21-37, was an abandoned location.

Sims Area

Skelly Oil Co. No. 1 R. R. Sims C, C SE SW sec. 3-23-37. T.D. 3,388 ft.; drlg. by tools at 3,369 ft.

Penrose & Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 3,680 ft.; cleaning out.

W. H. Street et al No. 1 Wood, C W½ SE NE NE sec. 22-22-37. T.D. 3,654 ft.; running tubing.

J. E. Farrell No. 1-A Walden, C SW NW sec. 15-22-37. T.D. 3,746 ft.; cleaning out.

Skelly Oil Co. No. 4 Baker, C SW NW sec. 27-22-37. T.D. 3,610 ft.; C.O.

Skelly Oil Co. No. 1 Sticher, sec. 4-22-37. T.D. 3,571 ft.; standardizing.

Gulf Oil Corp. No. 1 Davis, sec. 8-23-37. T.D. 1,344 ft.; set 8⅝-in. at 1,343 ft.

J. E. Farrell No 2-B Walden, C NE SW sec. 15-22-37. T.D. 1,925 ft.; S.D.

J. E. Farrell No. 2-C Walden, C SE SW sec. 15-22-37. Drlg. 2,935 ft.

Empire O. & R. Co. No. 2 Walden, sec. 21-22-37. Derrick.

Skelly Oil Co. No. 2 H. O. Sims, sec. 4-23-37. Drlg. 1,885 ft.

Skelly Oil Co. No. 5 R. R. Sims, sec. 3-23-47. Cellar and pits.

Tide Water Oil Co. No. 3 Walden, sec. 21-22-37. Drlg. 550 ft.

Skelly Oil Co. No. 2 G. W. Sims, sec. 9-23-37. T.D. 3,405 ft.; set 7-in. at 3,400 ft.

Continental Oil Co. No. 21-A-2 Elliott, C SW SE sec. 21-22-37. T.D. 250 ft.; running casing.

Skelly Oil Co. No. 3 R. R. Sims, sec. 4-23-37. T.D. 3,395 ft.; waiting on standard tools.

Skelly Oil Co. No. 4 R. R. Sims, sec. 4-23-37. T.D. 3,390 ft.; set 7-in. csg. at 3,389 ft.

Cooper Area

Southern Oil Corp. No. 1 Gates, C SW NW sec. 23-24-26. T.D. 3,514 ft.; S.D. for orders.

Amerada Pet. Corp. No. 3 Isabell, C SW NE sec. 15-24-36. T.D. 3,484 ft.; set 6½-in. at 3,481 ft.

Lea County—Miscellaneous

Brown & Reynolds No. 1 Parcell, C NW SE sec. 8-21-38. Wildcat; T.D. 4,397 ft.; P.B. 4,386 ft.; testing.

Amon G. Carter No. 2 Elliott, C NE SW sec. 22-22-37. T.D. 3,622 ft.; cleaning out.

Magnolia Pet. Co. No. 1 State G, NW NW NE sec. 24-17-34. T.D. 4,905 ft.; P.B. 4,794 ft.; testing.

Continental Oil Co. No. 1 Wantz, C SW SW sec. 21-21-37. T.D. 3,280 ft.; S.D.

Stanolind O. & G. Co. No. 1 Meyers, sec. 22-24-37. T.D. 3,553 ft.; cleaning out.

Texas Co. No. 1 Alexander, sec. 5-21-37. T.D. 3,755 ft.; testing.

Samedan Oil Co. No. 3 Hughes, sec. 4-23-27. T.D. 3,631 ft.; cleaning out.

Texas Co. No. 2 Black, sec. 21-24-37. Drlg. 3,065 ft.

Gulf Oil Corp. No. 1 Hardy, C SE SW sec. 20-21-37. T.D. 3,810 ft.; to shoot.

Anderson-Prichard Oil Corp. No. 1 Wells, C SE SE sec. 5,25-37. Drlg. 2,900 ft.

Herschback et al No. 1 Alston, C SW NE sec. 31-17-37. Drlg. 3,170 ft.

Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17 32. T.D. 3,853 ft.; testing.

Ohio Oil Co. No. 1 Grizzell, C SW SE sec. 5-22-37. Drlg. 3,468 ft.

Mid-Continent Pet. Corp. No. 1 Boren, C NE NE sec. 20-22-36. T.D. 3,830 ft.; testing.

Stanolind O. & G. Co. No. 2 Meyers, SW sec. 4-24-37. Drlg. 2,620 ft.

Stanolind O. & G. Co. No. 3 Meyers, SE sec. 4-24-37. Drk

Gulf Oil Corp. No. 1 Boyd, sec. 23-22-37. Drlg. 2,515 ft.

Gulf Oil Corp. No. 2 King, sec. 28-21-37. T.D. 3,675 ft.; set casing.

Gulf Oil Corp. No. 1 Shahan, sec. 33-25-37. Wildcat; T.D. 2,600 ft.; S.D. for orders.

Gulf Oil Corp. No. 1 Woolworth, sec. 30-24-37. Wildcat; drlg. 2,720 ft.

Repollo Oil Co. No. 2-B Stuart, sec. 10-25-37. T.D. 3,326 ft.; set 7-in. at 3,289 ft.

Maljamar O. & G. Co. No. 3 Mitchell, C SE NE sec. 20-17-32. Derrick.

Texas Co. No. 1 Fristoe, C SW NW sec. 35-24-37. Drlg. 2,460 ft.

Stanolind O. & G. Co. No. 4 Meyers, sec. 22-24-37. T.D. 1,358 ft.; set 8⅝-in. at 1,317 ft.

Stanolind O. & G. Co. No. 5 Meyers, sec. 22-34-37. Derrick.

Magnolia Pet. Co. No. 1 Hanna, sec. 7-26-38. Wildcat; T.D. 1,385 ft.; standardizing.

Empire O. & R. Co. No. 3-A Closson, sec. 6-22-36. Derrick.

Gulf Oil Corp. No. 1 Knight, sec. 27-24-37. Drlg. 330 ft.

Harry Leonard No. 1 Siddall, sec. 6-20-38. Wildcat; drlg. 1,517 ft.

Skelly Oil Co. and Devonian Oil Co. No. 2 Christmas, sec. 21-22-36. Drlg. 1,315 ft.

Humble O. & R. Co. No. 1 Greenwood, sec. 9-22-37. Drlg. 1,875 ft.

Landreth Prod. Co. No. 2 Grizzell, sec. 5-22-37. Moving in rotary.

Harry Leonard No. 5 Lanehart, sec. 21-25-37. T.D. 2,965 ft.; cleaning out.

Magnolia Pet. Co. No. 3 Cary, sec. 21-22-37. Loc.

Repollo Oil Co. No. 1 Fowler, sec. 9-24-37. T.D. 3,076 ft.; rigging up machine.

El Paso Natural Gas Co. No. 1 Camp, C SW SW sec. 6-24-37. T.D. 50 ft.; S.D. for orders.

Schermerhorn Oil Co. No. 1 Woolworth, C NW NE sec. 28-24-37. Rigging up machine.

Gulf Oil Corp. No. 1 Westfall, SE SW SE sec. 15-25-37. Rigging up rotary.

Continental Oil Co. No. 1 Burger, C NW SW sec. 19-20-38. Moving in rotary.

Culbertson-Irwin et al No. 1 Moseley, SE NE SW sec. 34-24-37. Derrick.

Continental Oil Co. No. 1-A-15 Cline, NW sec. 15-23-37. Wildcat; cellar and pits.

Repollo Oil Co. No. 2 Christmas, sec. 28-22-37. Loc.

Repollo Oil Co. No. 1 Turner, sec. 29-21-37. Cellar and pits.

Eddy County

Adams et al No. 1 Page, sec. 15-21-18. Wildcat; T.D. 100 ft.; S.D.O.

Republic Prod. Co. No. 7 Russell A, NW SE NW sec. 18-17-31. T.D. 3,535 ft.; cleaning out.

Republic Prod. Co. No. 3 Robinson Permit, C NE NE sec. 21-17-29. T.D. 2,798 ft.; testing.

Barnsdall Oil Co. No. 5 Dodd, sec. 22-17-29. T.D. 2,757 ft.; P.B. 2,730 ft.; cleaning out.

William Dooley No. 2 Hatchett, SW SW NE sec. 14-20-26. T.D. 152 ft.; pulling casing.

H. & W. Drlg. Co. No. 1 Forgarty, C SW SW sec. 14-23-29. Wildcat; drlg. 3,075 ft.

Flint Prod. Co. No. 1-B Flint, sec. 20-17-30. Drlg. 2,930 ft.

Murchison No. 1-B State, SE sec. 16-17-30. T.D. 3,180 ft.; testing.

Carper Drlg. Co. No. 1 Gissler, NW sec. 23-17-30. Loc.

Continental Oil Co. No. 1 Barrett, NW sec. 22-20-30. T.D. 1,142 ft.; fishing.

Wesley McCallister No. 1 Cagle, C NW NW sec. 8-26-30. Loc.

Repollo Oil Co. No. 1-D Parke, sec. 15-17-30. Drlg. 1,410 ft.

Flynn, Welch, Inc., No. 2 Stevens, sec. 13-17-30. Drlg. 2,294 ft.

Neil Wills et al No. 1 Stovall-Wood, sec. 20-20-30. Drlg. 1,145 ft.

Carlsbad Oil Co. No. 1 Pecos Irrigation, C NE SE sec. 15-25-28. Drlg. 300 ft.

Barnsdall Oil Co. No. 6 Dodd, sec. 22-17-29. Drlg. 1,510 ft.

Grayburg Oil Co. No. 3 Keely, SE NE NE sec. 24-17-29. T.D. 405 ft.; set 8¼-in. casing.

F. W. & Y. Oil Co. No. 3 Jackson, C NW SE sec. 13-17-30. Moving in machine.

F. W. & Y. Oil Co. No. 4 Gissler, C SE SE sec. 14-17-30. T.D. 439 ft.; set 10¾-in.

F. W. & Y. Oil Co. No. 5 Gissler, C NE SE sec. 14-17-30. Rigging up machine.

Harry Leonard No. 10 State, SE SW SW sec. 27-17-29. Drlg. 4,705 ft.

Fred Brainerd No. 2 Brainerd, sec. 5-18-27. Loc.

W. A. Nichols No. 1 Johnson, NE sec. 35-16-31. Wildcat; loc.

Roosevelt County

Clovis Corp. No. 2 Wilmes, C SE NE sec. 17-2s-30e. T.D. 3,318 ft.; running casing.

Dummit Oil Co. No. 1 Todd, SE SE sec. 34-3n-29. Drlg. 500 ft.

Otero County

George Muldey No. 1 State, SW cor. sec. 11-25-8e. T.D. 263 ft.; S.D.

O. K. Hearte No. 1 Hattie Evans, NW NW SW sec. 22-24-12. O.W.D.D.; wildcat; T.D. 1,951 ft.; S.D.

Curry County

Bond & Harrison No. 1 Hart Ranch, C NW SE sec. 13-2n-31. Drlg. 310 ft.

McKinley County

S. Dysart No. 1 Government, NE sec. 14-14-10w. T.D. 1,390 ft.; fishing.

Monument Area

Gulf Oil Corp. No. 2 Hatchett, C SW NW sec. 33-19-37. T.D. 3,905 ft.; preparing to reacidize.

Amerada Pet. Corp. No. 1-X State, C NW SW sec. 16-20-37. T.D. 3,764 ft.; S.D. for orders.

Continental Oil Co. No. 16-C-1 State, C SW NW sec. 16-20-37. T.D. 3,809 ft.; cleaning out after fire.

Gulf Oil Corp. No. 1 Bates, C SE SE sec. 26-19-36. T.D. 3,973 ft.; to shoot.

Phillips Pet. Co. No. 1 Mexico-State, C NE NE sec. 30-20-37. T.D. 3,843 ft.; rerunning tubing.

Repollo Oil Co. No. 4-A Phillips, NW SW sec. 31-19-37. T.D. 3,910 ft.; drlg. plug.

Tide Water Oil Co. No. 2 Laughlin, C NE SW sec. 4-20-37. Drlg. 3,616 ft.

Amerada Pet. Corp. No. 3-V State, NE sec. 36-19-36. T.D. 3,806 ft.; set 6⅝-in. at 3,796 ft.

Shell Pet. Corp. No. 3-M State, NE sec. 1-21-36. T.D. 3,857 ft.; testing.

Amerada Pet. Corp. No. 2-A Byrd, sec. 12-20-36. Drlg. 3,162 ft.

Amerada Pet. Corp. No. 2 Laughlin, sec. 9-20-37. T.D. 3,790 ft.; set 6⅝-in.

Gulf Oil Corp. No. 2-F Bell-State, sec. 36-20-36. T.D. 3,740 ft.; set 5½-in. at 3,735 ft.

Phillips Pet. Co. No. 1 Hudson-State, sec. 30-20-37. T.D. 3,850 ft.; running tubing.

Phillips Pet. Co. No. 1 Quapaw-State, sec. 10-20-37. T.D. 3,840 ft.; testing.
Texas Co. No. 2-K State, sec. 18-19-37. Drlg. 3,892 ft.
Amerada Pet. Corp. No. 6 Byrd, C SW SE sec. 12-20-36. T.D. 3,780 ft.; set 6⅝-in. at 3,779 ft.
Gulf Oil Corp. No. 1-C Kutter-State, C SE NE sec. 18-19-37. Drlg. 1,684 ft.
Gulf Oil Corp. No. 7 Anderson, C SE NE sec. 17-20-37. T.D. 3,799 ft.; set 5½-in. at 3,796 ft.
Gulf Oil Corp. No. 2 Smith, C NE NE sec. 34-19-36. Drlg. 1,277 ft.
Shell Pet. Corp. No. 2-E State, C NW NW sec. 13-20-36. Drlg. 3,485 ft.
Shell Pet. Corp. No. 4-K State, C NW NE sec. 36-20-36. Drlg. 2,830 ft.
Tide Water Associated Oil Co. No. 1-J State, C SW NW sec. 17-19-37. Drlg. 3,810 ft.
Repollo Oil Co. No. 7 Barber, sec. 8-20-37. T.D. 3,840 ft.; preparing to kill well.
Continental Oil Co. No. 4-B-18 Britt, sec. 18-20-37. T.D. 3,215 ft.; S.D. for orders.
Continental Oil Co. No. 4-A-11 Sanderson, sec. 11-20-36. Drlg. 3,755 ft.
Ohio Oil Co. No. 3 Laughlin, sec. 9-20-37. Drlg. 3,577 ft.
Ohio Oil Co. No. 1 State-Hansen, sec. 16-20-37. Drlg. 3,210 ft.
Amerada Pet. Corp. No. 4-F State, C SE SW sec. 36-19-36. Drlg. 3,293 ft.
Stanolind O. & G. Co. No. 3 Gillully, sec. 24-20-36. T.D. 3,825 ft.; acidized.
Texas Co. No. 7 Lieu-Lands, sec. 20-20-37. Drlg. 3,768 ft.
Amerada Pet. Corp. No. 2-M State, sec. 13-20-36. Drlg. 710 ft.
Amerada Pet. Corp. No. 4-V State, sec. 36-19-36. T.D. 3,908 ft.; running tubing.
Amerada Pet. Corp. No. 1-Y State, sec. 17-20-37. T.D. 2,401 ft.; set 8⅝-in. at 2,394 ft.
Amerada Pet. Corp. No. 2-Y State, sec. 17-20-37. T.D. 205 ft.; set 12½-in. at 192 ft.
Amerada Pet. Corp. No. 1-Z State, sec. 13-20-36. Drlg. 1,790 ft.
Amerada Pet. Corp. No. 2-Z State, sec. 13-20-36. Drlg. 1,057 ft.
Gulf Oil Corp. No. 8 Ramsey, sec. 17-20-37. T.D. 300 ft.; set 10-in. csg. 290 ft.
Gulf Oil Corp. No. 2-D Orcutt, sec. 13-20-36. T.D. 3,535 ft.; reset csg.
Gulf Oil Corp. No. 3 White, sec. 25-20-36. Derrick.
Phillips Pet. Co. No. 2 Hobbs, sec. 18-20-37. T.D. 260 ft.; set 13-in. at 251 ft.
Phillips Pet. Co. No. 3 Mexico, sec. 18-20-37. Derrick.
Skelly Oil Co. No. 4 Van Etten, sec. 9-20-37. Drlg. 3,609 ft.
Atlantic Prod. Co. No. 1-O State, sec. 32-20-37. T.D. 1,151 ft.; set 7⅝-in. csg.
Empire Oil & Ref. Co. No. 1 Persons, sec. 27-19-36. Loc.
Skelly Oil Co. No. 5 Van Etten, sec. 9-20-37. Cellar and pits.
Skelly Oil Co. No. 6 Van Etten, sec. 9-20-37. T.D. 168 ft.; set 13-in. at 167 ft.

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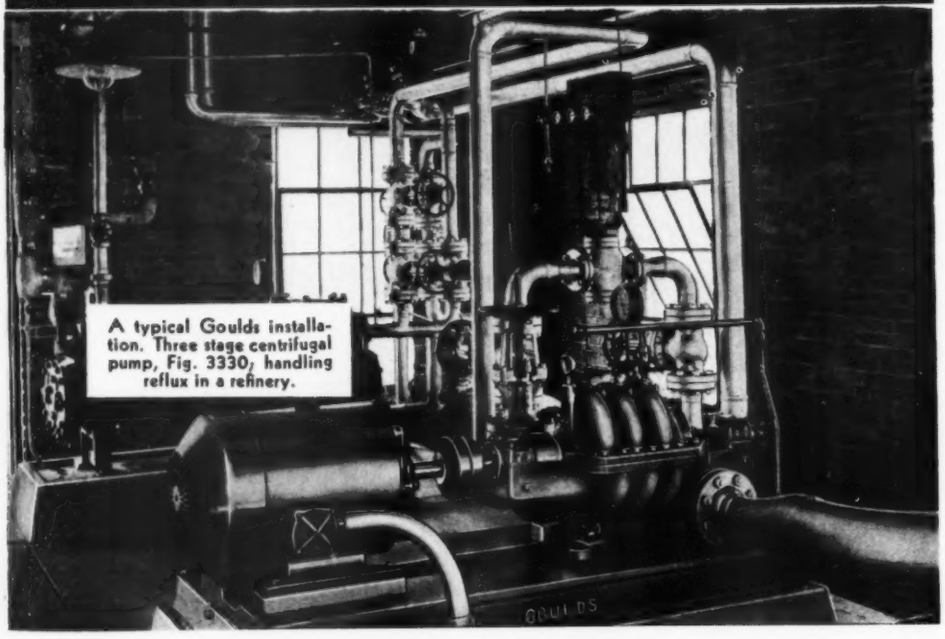

A typical Goulds installation. Three stage centrifugal pump, Fig. 3330, handling reflux in a refinery.

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7334

Continental Oil Co. No. 17-A-4 State, C NE SW sec. 17-19-37. Rigging up rotary.
Amerada Pet. Corp. No. 3 Laughlin, C NW NE sec. 9-20-37. Derrick.
Humble O. & R. Co. No. 4-F State, C SW SW sec. 17-20-37. T.D. 1,159 ft.; set 7⅝-in.
Continental Oil Co. No. 18-B-5 Britt, C SW NW sec. 18-20-37. Cellar and pits.
Continental Oil Co. No. 11-A-5 Sanderson, NE SE SW sec. 11-20-36. Rigging up rotary.
Ohio Oil Co. No. 2 State-Hansen, C W½ SW NE sec. 16-20-37. Location.
Gulf Oil Corp. No. 8 Anderson, C SW NE sec. 17-20-37. T.D. 2,425 ft.; set 7⅝-in. at 2,410 ft.
Amerada Pet. Corp. No. 4-D State, sec. 1-20-36. Derrick.
Amerada Pet. Corp., No. 4-T State, sec. 25-19-36. Cellar and pits.
Amerada Pet. Corp. No. 2-B Weir, sec. 26-19-36. Cellar and pits.
Gulf Oil Corp. No. 4-F Bell-State, sec. 36-20-36. Rigging up rotary.
Gulf Oil Corp. No. 2-G Bell-State, sec. 13-20-36. Loc.
Gulf Oil Corp. No. 4 White, sec. 25-20-36. Derrick.
Repollo Oil Co. No. 5 Byrd, sec. 11-20-36. Cellar and pits.
Texas Co. No. 8 Lieu Lands, sec. 20-20-37. Loc.

Chaves County

J. & L. Drlg. Co. No. 1 Hurd, C SE NW sec. 14-11-26. Drlg. 1,022 ft.
English & Harmon No. 1 Billingslea, SE sec. 9-15-29. Drlg. 1,630 ft.

Eunice Area

Getty Oil Corp. No. 1 State D, C SE NE sec. 32-20-37. T.D. 3,860 ft.; cleaning out.
Gulf Oil Corp. No. 4 Leonard, C SW NE sec. 22-21-36. T.D. 3,905 ft.; P.B. to 3,892 ft.; testing.
Jim Murray No. 4 State-Wallace, sec. 3-21-36. Cellar.
Gulf Oil Corp. No. 1 Bell-Ramsey B, C SW SW sec. 29-20-37. T.D. 3,840 ft.; S.D.
Tide Water Associated Oil Co. No. 1 Marshall, C SW NE sec. 13-21-36. Drlg. 3,966 ft.
Ohio Oil Co. No. 6 McDonald, C SE SW sec. 16-22-36. Drlg. 1,220 ft.
Oil Well Drlg. Co. No. 1 State A, C NW NW sec. 16-22-36. T.D. 3,804 ft.; testing.
Stanolind O. & G. Co. No. 1 Owen, NW sec. 3-22-37. T.D. 3,600 ft.; moving in standard tools.
Devonian Oil Co. No. 2 State, SE sec. 3-21-36. T.D. 3,843 ft.; preparing to acidize.
Continental Oil Co. No. 30-A-4 Lockhart, sec. 30-21-36. T.D. 3,820 ft.; set 5½-in. at 3,794 ft.
Two States & Southern Pet. Expl. No. 3 McQuatters, C SW NE sec. 11-21-36. Drlg. 3,180 ft.
Gulf Oil Corp. No. 13 Arnott-Ramsey, sec. 21-21-36. Drlg. 2,280 ft.
Humble O. & R. Co. No. 1-G State, sec. 23-21-36. Drlg. 3,650 ft.
Texas Co. No. 4 Rector, sec. 30-21-36. T.D. 3,780 ft.; set 7-in. at 3,764 ft.
Gulf Oil Corp. No. 2-E Bell-State, sec. 11-21-36. Drlg. 940 ft.
Gulf Oil Corp. No. 3 Campbell, sec. 7-21-36. T.D. 3,914 ft.; P.B. 3,898 ft.; testing.
Gulf Oil Corp. No. 4 Campbell, sec. 7-21-36. Derrick.
Empire Oil & Ref. Co. No. 1-G State, sec. 2-21-36. Drk.
Gulf Oil Corp. No. 5 Collins, sec. 14-21-36. Derrick.
Gulf Oil Corp. No. 8-C Orcutt, sec. 6-21-36. Drlg. 1,260 ft.
Stanolind Oil & Gas Co. No. 1 McQuatters, sec. 11-21-36. Drlg. 3,317 ft.
Stanolind Oil & Gas Co. No. 1-A Langlie, sec. 11-21-36. T.D. 14 ft.; set 12½-in. csg.
Humble O. & R. Co. No. 2-G State, C NE NW sec. 23-21-36. Cellar and pits.
Stanolind O. & G. Co. No. 1 Hill, C Lot 15, sec. 5-21-36. Location.
Gulf Oil Corp. No. 4-C Arnott-Ramsey, sec. 21-21-36. Rigging up rotary.
Shell Pet. Corp. No. 2-M State, sec. 1-21-35. T.D. 3,757 ft.; fsg.

Dona Ana County

Juels C. Bertrand No. 1 Casad Permit, sec. 24-26-5e. T.D. 47 ft.; set 20-in. at 37 ft.

Hobbs Area

Stanolind O. & G. Co. No. 9 State, sec. 9-19-38. Drlg. 3,385 ft.
Stanolind O. & G. Co. No. 7-X Thorpe, sec. 18-19-37. T.D. 4,201 ft.; testing.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW sec. 19-11n-4e. Drlg. 3,200 ft.

San Juan County

Anna Oil Corp. No. 6 Govt., SW NE NE sec. 33-30n-11w. S.D. at 370 ft.
Jack Amenda No. 4 Hart, NW NE SW sec. 25-30n-12w. Drlg. 1,785 ft.
Continental Oil Co. No. 59 Tribal, SE SW SE sec. 35-30n-19w. T.D. 760 ft.; top sd. 740 ft.; tstg.

Socorro County

R. Allen Brown, Tr., No. 1 Belen Grant, SE NW sec. 16-2n-1e. Bldg. rig.

Valencia County

C. A. Grober et al No. 1 Fuqua, NE NE sec. 19-5n-3e. S.D. 440 ft. in L.

COLORADO

Adams County

Glenridge Oil Co. No. 1 Hills, SE SE SE sec. 27-3s-64w. S.D. 4,345 ft.; parted pipe in hole.

Boulder County

Boulder Producing & Refining Co. is starting a third test in the Warren pool west of the old Boulder field in its No. 1 Harlow Estate. It is 6 miles north of the discovery, the same interests' No. 1 Maxwell, NW NE NW section 24-1n-71w, completed early in 1936 in the Muddy sand at 1,095-1,160 feet, and 2 miles west of the old Inland Oil & Refining Co. pool, now abandoned.

Boulder Prod. & Ref. Co. No. 1 Harlow Est., SE NE sec. 36-2n-70w. Drlg. 110 ft.

Huerfano County

S. W. Pressey No. 1 Ojo, SW NE sec. 10-29s-69w. Drlg.

3,350 ft. after lowering 5⅞-in. to bottom to S.O. cavings caused by gas; Dakota expected 3,900 ft.

Kiowa County

The Morgan & Flynn test on the Nee-No-Shee block in the C NW SE section 6-20s-47w, probably will go ahead at an early date as a result of a rearrangement of agreements. It is understood Helmerich & Payne, drilling contractors, are figuring on taking over the Olson contract.

Larimer County

L. D. Charboneau et al No. 1 Thompson, C NE sec. 12-4n-70w. Drlg. 153 ft.

Lincoln County

Consolidated Smelting & Metals Corp. No. 1 Hancock, NE NE SW sec. 7-17s-52w. C.O. and trying to lower 8¼-in. to 2,240 ft.

Moffat County

Mountain Fuel Supply Co. No. 1 Donnell, C SE NE sec. 31-12n-97w. Drlg. 3,567 ft.
Anderson-Kerr Drlg. Co. et al No. 1 Denise, C SE SE sec. 19-9n-99w. Drlg. 1,700 ft.
Anderson-Kerr Drlg. Co. No. 1 Marrs, C SE NE sec. 17-11n-100w. Bldg. road.

Morgan County

Swisher et al No. 1 Lunt, SE cor. sec. 3-4n-60w. T.D. 1,718 ft.; W.O. shooter.

Park County

South Park Oil Co. No. 1 Lemar, Hartsel district, is stopping to test at 4,567 feet, total depth, where it has gone through approximately 500 feet of saturated shale between 4,060 and 4,567 feet. It is cleaning out to run tubing. It is believed the shale saturation is commercial.

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75. T.D. 4,567 ft.; prep. to test.
South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. S.D. 5,705 ft.

Rio Blanco County

Texas Co. and California Co. are preparing to let a contract for a joint operation on the Wilson Creek dome in Rio Blanco County to be a deep test with rotary to the Sundance formation at between 6,500 and 7,000 feet. Tentative location is on the Freeman permit in the SE SE section 27-3n-94w. Texas Co. will be in charge of the drilling. All leases and permits on the structure, which is a large one, have been brought under a unit agreement approved by the secretary of the interior. The structure has been drilled twice, but neither went to the Sundance which subsequently has been proven for oil in the Iles and Moffat pools in Moffat County. In 1920, Richmond Petroleum Co., subsidiary of Standard of California, drilled in the NW SE section 27 and abandoned the hole at 4,826 feet without reaching the Dakota. It had gas at 2,935, 3,475 and 3,630 feet. In 1927 Texas Production Co. drilled its No. 1 Freeman in the SE NW SE section 27 to 5,913 feet where it was abandoned after encountering water in the Dakota.

WYOMING

Albany County

Hal Blakeman No. 1 Chapple, C NE NW sec. 33-21n-76w. C.O. to bottom at 1,681 ft.
Murphy Oil Co. No. 1 Holst-Woolf, NW NW NW sec. 19-17n-76w. Drlg. 3,496 ft.; gray sh. and shells.
Murphy Oil Co. No. 3 Wilson, SW NW SW sec. 18-17n-76w. T.D. 4,010 ft.; rng. 7-in.

Big Horn County

Ohio Oil Co. No. 1 State, a near completion in the Tensleep, showed for 300 bbls. a day on a swabbing test at 5,437 feet and is still testing. This company's No. 1 Pryde, a first report, is an offset to its No. 1 Till, completed a few months ago for 262 bbls. initial.

Ohio Oil Co. No. 1 Pryde, C SW SE sec. 24-56n-97w. R.U. (first report).
Ohio Oil Co. No. 1 Baker-Byron, SE NW sec. 23-56n-97w. Cg. 5,312 ft. in L.; good sat.; top Embar 5,080 ft.; cmtd. 7-in. 5,090 ft.
Ohio Oil Co. No. 1 State, NE cor. Lot 38, sec. 36-56n-97. T.D. 5,437 ft.; tstg.
Woods-Callahan Oil Co., Ltd., and Wyoming O. & R. Co. No. 1 Evans, NE NE NW sec. 12-44n-91w. M.I. rot. rig from California.

Campbell County

G. J. Sherin et al No. 1 Rodes, NE SE SW sec. 24-49n-74w. Drlg. 425 ft.

Carbon County

Ohio Oil Co. No. 6 Diamond Cattle, NW NW sec. 35-20n-78w. Cmtg. 696 ft.; 5⅞-in. liner on top Sundance at 3,314 ft.
Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78w. Drlg. 2,130 ft. in Sundance; slow progress due to heavy mud carried to hold back gas pressure.
Ohio Oil Co.-California Co. No. 2 Kyle, C SE SE sec. 26-21n-79w. Drlg. 5,438 ft.
Ohio Oil Co.-California Co. No. 4 Union Pacific, C SW SW sec. 25-21n-79w. Drlg. 5,117 ft.
Ohio Oil Co.-Medicine Bow Oil Co. No. 1 U. P.-Wister, C NW SW sec. 17-22n-78w. Rigged up ready to spud.
Ohio Oil Co. No. 8 Dixon, SE NE SE sec. 34-20n-78w. Drlg. 3,161 ft.; O.W.D.D. from 3,094 ft.

Converse County

Chadron-Osage Oil Co. No. 1 State, SW cor. sec. 16-32n-69w. Drlg. at 3,250 ft.
Wyoming Southern Oil Co. No. 2 Salisbury, NE NW SE sec. 27-32n-69w. Drlg. at 445 ft.
Wyoming Southern Oil Co. No. 1 Evert, NW NW SW sec. 26-32n-69w. Spudding.

Fremont County

Ben Stewart No. 1 Darnell, NE SE sec. 26-3n-1w. M.I.M. to test Frontier at 600 ft.; 1½ mi. E of Pilot Butte wells.

Johnson County

Carter Oil Co. has let contract to Noble Drilling Co. for its deep rotary test on the Billy Creek structure. Rig used in drilling Amerada Petroleum Corp.'s deep test southwest of Laramie County is being moved in. Location is an offset to its No. 2 Rider which was completed in 1927 for 70,000,000 feet of gas a day in the Frontier.

Carter Oil Co. No. 3 Rider, C NW SE sec. 17-48n-82w. M.I.M. and bldg. rig.

Lincoln County

H. M. Eller et al No. 4 Govt., SE NW SW sec. 32-19n-116w. T.D. 401 ft.; will test S.O. in lenticular sd. at 397-401 ft.
Place Oil Co. No. 1 Davis, SE SE SE sec. 9-26n-113w. S.D. at 780 ft.

Niobrara County

The action of Continental Oil Co. in placing on record permits and leases on a large block of leases east of the Lance Creek field calls attention to the possibility of the territory in that direction. Western States Oil & Land Co. drilled a well in 1919 on the SW NE section 28-36-64, about 6 miles east and north of the nearest Sundance producer. This well was completed in the Dakota sand at 3,965-4,008 feet and has produced upward of 140,000 bbls. in the past 18 years. At last reports it was making 25 to 30 bbls. a day. The oil is from the top of the sand and water at the bottom was never completely shut off. Geologists at the time believed it was on a nose of the Lance Creek structure. Wells drilled half a mile to the north and same distance to the southwest were failures. The Continental block includes the major portions of sections 21, 22, 23, 26, 27, 28, 29, 30 and 31 and N half of sections 32, 33, 34 and 35-36-64. Argo Oil Co. and J. M. Huber Corp. have two 80-acre tracts in section 29 and the producing well is on an Argo tract.

Ohio Oil Co. No. 8 Carrie Putnam is a near completion at 4,078 feet and is rated at 90 bbls. an hour

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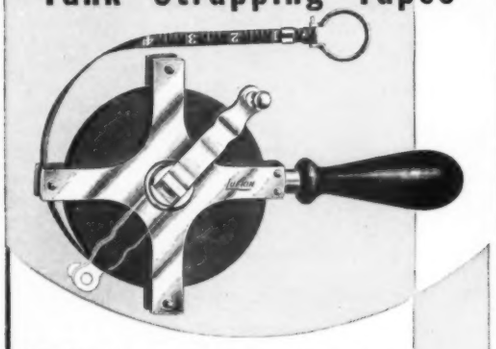

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POMONA
TURBINE PUMPS

through the tubing. It gauged 760 bbls. in 12 hours through the 2-inch from the basal Sundance at 4,020-74 feet.

One new location was made by A. B. Cobb and Holly Development Co. in their No. 2 Novick, an offset to their No. 1 Novick completed recently as a good producer. Ohio Oil Co. is rigging up to deepen two old wells to the Sundance. Its No. 2 Richards & Comstock will be deepened from the Upper Sundance at 3,650 feet, from which it produced 140 bbls. initial upon completion in 1932. Its No. 2 Putnam was a 20,000,000-foot gasser in the Muddy at 3,430 feet when completed a number of years ago.

Ohio Oil Co. No. 2 Putnam, NE SW NW sec. 4-35n-65w. R.U. to deepen from 3,430 ft. (first report).
Ohio Oil Co. No. 2 Richards & Comstock, C NE SW sec. 32-36n-65w. R.U. to deepen from 3,650 ft. (first report).
A. B. Cobb and Holly Dev. Co. No. 2 Novick, SE SE SW sec. 6-35n-65w. M.I.M. (first report).
Continental Oil Co. No. 4 Schuricht B, NW SW SE sec. 6-35n-65w. Loc. (first report).
Continental Oil Co. No. 8 Otto Rohlff, SW SW SE sec. 31-36n-65w. Loc. (first report).
Continental Oil Co. No. 10 Tom Bell Cattle, C SW NW sec. 34-36n-65w. M.I.M.
Ohio Oil Co. No. 1 Leo 17, NW NW SE sec. 35-36n-65w. Rig up.
Ohio Oil Co. No. 8 Putnam, SW SE SW sec. 33-36n-65w. Testing production at 4,078 ft.
MacKinnie Oil & Drlg. Co. No. 2 Thompson, NW NW NE sec. 7-35n-65w. Spdg.
J. M. Huber Corp. No. 1 Lamb, SE SE SW sec. 27-36n-65w. T.D. 3,897 ft.; fsg. D.P.
Riggs Oil Co. No. 2 Spaugh, SE SE SW sec. 32-34n-65w. S.D. 1,430 ft.; probably abd.; tested Minnelusa.
Ohio Oil Co. No. 5 Leo, NW NW SW sec. 35-36n-65w. Drlg. below 4,407 ft.; depth not reported.

Natrona County

Stanolind Oil & Gas Co. has made a location for a Tensleep well in Salt Creek in its No. 1 T.P., C NW SE section 26-40-79, half a mile north and a little east of the Tensleep well drilled in 1929-1930.

Stanolind O. & G. Co. No. 1 T.P., C NW SE sec. 26-40n-79w. Loc. (first report).
Empire State Oil Co. No. 3-U, SE NE sec. 33-34n-83w. Drlg. red sh. 2,490 ft.
Wyalta Oil Co. No. 4 Govt., NW NW sec. 5-29n-81w. Cmtd. 6⅝-in. on top of Sundance at 1,082 ft.; rng. 2-in. tbg. to test at 1,030-72 ft.
Wyalta Oil Co. No. 5 Govt., SW SW sec. 30-30n-81w. Testing at 1,021 ft.
Wyalta Oil Co. No. 6 Govt., NE SE NW sec. 5-29n-81w. Spudding for deep test.

Park County

Resolute Oil Co., of which Julius C. Peters is president, has let contract to Manning & Martin, Inc., for two deep wells on the Badger Basin dome, where the company has two producers. The first of them will be on a government permit in the C NE NE section 20-57-101, half a mile southwest of No. 1 State and three-fourths of a mile south and a little east of the discovery. The location for the second well will be made some time next month following a seismograph survey by John H. Wilson's Colorado Geophysical Corp. One of the new wells probably will go to the Dakota.

Resolute Oil Co. No. 1 Govt., C NE NE sec. 20-57n-101w. R.U.R. (first report).
General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. Unloaded and tested 3 B.P.D. in Embar at 5,860 ft.; cg. deeper.

Platte County

Dividend O. & R. Co., Inc., No. 1, CSL NW SW sec. 17-24n-66. S.D. 2,385 ft.; C.D.

Sweetwater County

Mountain Fuel Supply Co. No. 3 Union Pacific, SE NE sec. 15-16n-104w. R.U.R.; South Baxter Basin (first report).

Uinta County

E. A. Ottman et al No. 1 Govt., C SE NW sec. 26-14n-119w. M.I.M. for cable tool test to Bear River form. at 1,600 ft.

Washakie County

Arlton & Doyle No. 1 Govt., SW SW SE sec. 29-48n-91w. T.D. 1,356 ft.; prep. to resume.
Yale Oil Corp. No. 2 Govt., CEL SE SE sec. 25-48n-91w. Loc.
Bruce Teeter No. 5 Govt., CSL SW SW sec. 30-48n-90w. Drlg. 100 ft.; 10-in. at 85 ft.
Christensen & Thorne No. 3-X Govt., NW SW SW sec. 31-48n-90w. Drlg. sh. 860 ft.
Wyoming O. & R. Co. No. 8 Govt., NW NE NW sec. 31-48n-90w. Drlg. 200 ft.; 10-in. at 79 ft.
Wyoming O. & R. Co. No. 7 Govt., SW NW NW sec. 30-48n-90w. Drlg. bl. sh. 710 ft.; 10-in. at 87 ft.

Weston County

R. L. Rose No. 7, C SW SE sec. 8-46n-63w. Drlg. below 200 ft.

MONTANA

Big Horn County

Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. T.D. 3,830 ft.; S.D.

Glacier County

There were two completions and two new operations in the Cut Bank field. Dr. Peter Potter No. 2 All.-125, NW NE NE section 12-32n-6w, near the southern boundary of the pool, swabbed 100 bbls. first 24 hours at 2,995 feet. The Cut Bank sand was at 2,952-90 feet. There was no Sunburst sand. The 7-inch is at 2,975 feet and elevation is 3,762 feet.

Texas Co. No. 1 Stufft, Lot 4 (C NW NW) section 1-35n-6w, at the north end of the field, was plugged and abandoned at 2,975 feet. The Sunburst at 2,895-2,910 feet was dry. The Cut Bank sand was at 2,920-67 feet. It is an east offset to the company's No. 1 Walker, which swabbed 100 bbls. initial.

Texas Co. No. 39 Unit, C SE SW sec. 9-32n-5w. Spdg. 100 ft. (first report).
Nadeau Bros. No. 4 Farmers State Bank, CSL NE sec. 17-33n-5w. R.O.G. (first report).
Santa Rita O. & G. Co. No. 1 Rasmussen, C NE SW sec. 32-33n-5w. R.O.G.
Annand-Hutchings No. 3 Federal Land Bank, NE SE SW sec. 11-34n-6w. R.U.
R. E. Lee No. 1 Davis, C S½ SE sec. 15-32n-6w. Rig on loc. (first report).
Montana Headlight Oil Co. No. 4 Britton, NE SW NE sec. 14-34n-6w. Drlg. 1,700 ft.
Cut Bank Oil Trust No. 1 Yunck, SE SE SE sec. 23-34n-6w. Drlg. 390 ft.
Glacier Prod. Co. No. 2 Fuller, C NW SE sec. 17-33n-5w. Drlg. 2,220 ft.
Glacier Prod. Co. No. 2 Connolly, C SW SW sec. 6-33n-5w. Drlg. 2,675 ft.
Glacier Prod. Co. No. 1 Corrigeau, NW NW NW sec. 21-33n-5w. Drlg. 2,685 ft.
C. E. Walgren No. 2 Britton, C SE NE sec. 14-34n-6w. Drlg. 2,040 ft.
Santa Rita O. & G. Co. No. 1 Madison, CWL NW SW sec. 30-34n-5w. Cut Bank sd. at 2,827-70 ft.; dry; P.B. to test S.O. in Sunburst.
Wm. Hanlon, Agt., No. 2 All.-128, C NW SE sec. 12-32n-6w. Drlg. 3,025 ft.
Dakota-Montana Oil Co. No. 1 Tribal-136, C NE NE sec. 15-34n-6w. T.D. 2,790 ft.; drlg. by bit.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15e. Drlg. 1,400 ft.; Kootenai dry; will go to Madison.

Park County

Ben W. Ryan et al No. 1 Burgess, SE SW NW sec. 28-2s-11e. T.D. 606 ft.; prep. to resume.

Pondera County

Gordon Campbell No. 1 Hughes, NW NE NW sec. 12-30n-4w. T.D. 2,505 ft.; 1,400 ft. sulfur wtr. from 2,498-2,505 ft.; S.D.O.
Clinch Pet., Ltd., No. 1 Hollam, NW NW NW sec. 12-28n-6w. T.D. 2,200 ft.; resumed.

Phillips County

City of Malta No. 1 Govt., C SE SE sec. 18-30n-30e. T.D. 1,120 ft.; landed 6¼-in.; C.O.
R. G. Parrent No. 1 Hartman, C NW SE sec. 12-24n-25e. Drlg. 898 ft.

Toole County

Lamont Pet. Co. No. 1 Van Note, NE NE NW sec. 30-35n-2w. Drlg. 650 ft. (first report).
Wm. Knight No. 2 Havland, CWL SE NW sec. 19-35n-2w. Drlg. 700 ft. (first report).
Twin Buttes Synd. No. 1 Thompson, NW NE NW sec. 33-35n-3w. Drlg. 1,175 ft.
Nepstad & Vanderpas No. 2 Solberg, SW NE sec. 29-35n-3w. Drlg. 300 ft. (first report).
Welch Bros. No. 2 Larum, SW SW NW sec. 25-35n-3w. T.D. 1,658 ft.; prep. to shoot.
Watson et al No. 2 Leach, SE NE NE sec. 31-35n-3w. Spdg.
Big West Oil Co. No. 7 Dahlquist, CWL NW SE sec. 21-35n-3w. Spdg. (first report).
Stanley Gray No. 7 Govt., SW NW SW sec. 12-35n-3w. Drlg. 1,500 ft.
A. Beardslee No. 6 Swears, SW SE NW sec. 9-35n-2w. R.U.
Browning-Sunburst 32 Synd. No. 1 Goeddertz, NW NW SW sec. 21-36n-3w. R.U. (first report).
Agen & Kraus No. 1 Kraus, SE SE SE sec. 9-35n-3w. Drlg. 1,285 ft.
Wm. McKnight No. 2 Havland, CWL SE NW sec. 19-35n-2w. Rig up (first report).
Rimrock Oil Co. No. 1 Govt., CEL SW NW sec. 29-35n-3w. Moving in material (first report).
Shaver Oil Co. No. 2 Shaver, SE SW NE sec. 11-34n-2w. Rng. 5⅞-in. to 1,415 ft.
Shaver Oil Co. No. 3 Shaver, CSL SW NE sec. 11-34n-2w. Drlg. 160 ft.
Kevin-Butte Synd. No. 1 Thompson, NW NE NW sec. 33-35n-3w. T.D. 1,100 ft.; C.O. to land 8¼-in. on bottom.
W. S. Knight No. 1 Gunderson, SW SE NW sec. 9-35n-2w. S.D. in Ellis-Madison contact at 1,572 ft.
A. E. Crumley No. 11-A Shaw, SE NW NE sec. 35-36n-2w. Drlg. 1,500 ft.
Bryant Bros. No. 1 Lashbaugh, NE SW NW sec. 34-25n-2w. T.D. 850 ft.; R.U. heavier machine to resume.

Yellowstone County

Broadview Dome Oil Co. No. 1, NE NE SW sec. 18-3n-23e. R.U.
R. C. Tarrant No. 2 Sayre, NE NE SW sec. 26-3s-24e. Drlg. at 550 ft.

UTAH

Emery County

Standard Oil Co. of California and Continental Oil Co. No. 1-A Palm, C NW NW sec. 27-23s-11e. T.D. 1,652 ft.; prep. to resume.

Grand County

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. S.D. 6,715 ft. for heavier equip.
Columbia Crude Corp. No. 1 Rath, NW NW SE sec. 12-25s-20e. Drlg. below plug at 4,132 ft.

NEBRASKA

Sioux County

J. M. Huber Corp. and United Producers, Inc., No. 1 Morgan, C SW SW sec. 32-35n-56w. Drlg. 2,692 ft. (C.D.), hd. gr. sh.; top Fuson 2,585 ft.; top Lakota 2,655 ft.; no shows.

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-33n-50w. S.D. 2,250 ft. in sd.; wtr. in top Muddy at 2,245 ft.

Lincoln County

Smith & Wright No. 1 Hansen, C SW NW sec. 24-15n-31w. Drlg. below 1,278 ft.; did not test shows at 1,200 ft.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, May 1. — A California syndicate, represented by E. Rex Lovewell of Los Angeles, will drill this summer on acreage of the Canada Empire Crude Oil Syndicate in the Pouce Coupe district, northern Alberta. The area is in the northern foothills, west of Peace River and close to the British Columbia boundary. Canada Empire Crude Oil Syndicate, headed by James I. Hill, holds 49,000 acres on the structure.

Turner Valley Field

In West Central Turner Valley, Dalhousie Oil Co. No. 8, LSD 6, section 30-19-2w5, bottoming in the Madison limestone at 6,911 feet, is fishing for drill rods lost while cleaning out after a shot.

In section 5-19-2w5, Mercury Royalties No. 1, LSD 8, is at 2,820 feet, changing to rotary tools. Mercury Oils No. 8, LSD 3, section 4-19-2w5, has resumed after cementing casing at 2,755 feet. North American Petroleums No. 1, LSD 10, section 5-19-2w5, is starting.

In section 33-18-2w5, Royalite Oil Co. No. 5 Sterling-Pacific, LSD 12, is resuming after setting 10¾-inch casing at 2,836 feet. Royalite Oil Co. is starting No. 6 Sterling-Pacific in LSD 5, same section, about midway between No. 5 and No. 4 which has been flowing over 1,000 bbls. a day.

In the NW cor. of LSD 13, same section, Four Star Petroleum No. 1 has spudded. Location is just west of Turner Valley Royalties No. 1, and offsets No. 4 Sterling-Pacific to the south. The test is sponsored by R. A. Brown, Sr., and associates who drilled the Turner Valley Royalties producer.

New Tests in Foothills

On the Watson structure north and west of Lundbreck, Bealmore Oil Co. of Vancouver, British Columbia, will drill No. 1 test on a 320-acre tract secured from Mar Jon Petroleums, Ltd. Cable tool outfit from Mar Jon No. 3, which is changing to rotary, will be used. Location will be between the Mar Jon No. 3 well in LSD 3, section 4-10-2w5, and Mar Jon-Maxmont No. 4 in LSD 10, section 20-9-2w5. Officers of Bealmore Oil Co. are: President, Dr. Robert Mackenzie; directors, John H. Redden, John R. Sigmore, Vancouver; D. S. Beals, Major C. A. Moon, Seattle; secretary-treasurer, J. F. M. Pinkham, Calgary.

Canada Crude Oils, Ltd., has arranged for drilling of three deep lime tests on the Waite Valley structure, north and west of Turner Valley.

Interests associated with Highwood-Sarcee Oils, Ltd., have secured from the federal department of Indian affairs a grant covering some 49 sections or approximately 32,000 acres on the Sarcee Indian Reserve southwest of Calgary, and will undertake development this season. Most of the acreage is in Townships 23-4w5 and 23-3w5, with the eastern edge of the block about 10 miles west of Calgary. Sarcee Oil & Development Co. some years ago carried on extensive structure tests on the reserve.

High River—Aldersyde

In the High River area east of Turner Valley, Arca Development Corp. No. 1, NW section 24-18-1w5, is below 8,934 feet, more than 178 feet in the Madison lime, with some oil and gas shows. It will be deepened to about 9,100 feet before making a production test. The well which is the deepest in Canada is sponsored jointly by Imperial Oil, Ltd., Canadian Western Natural Gas, Light, Heat & Power Co. of Calgary and Edmonton Corp., Ltd. Rotary tools are being used.

Border Fields

On the Del Bonita structure south of Lethbridge, Wheatmen Petroleum, Ltd., recently organized by Chicago and Winnipeg interests at Lethbridge, will drill a test. Officers of the company are: William E. Ullman, Chicago; vice president, A. G. Baaim, Lethbridge; secretary-treasurer, F. A. Henry; directors, Francis L. Schreiner, Edwin J. Kuh, Chicago; W. L. Parrish, Winnipeg; D. S. Kelly, Calgary.

In the Taber field, Plains Petroleum Corp. No. 2, LSD 11, section 25-9-17w4, has derrick up and will spud early in May. Location is a quarter mile south of Plains No. 1, which is making 50 bbls. a day with a small amount of water. Kirk Hatch and associates of Montana are planning to drill a test northeast of Taber.

Steveville Development

In the Steveville area, about 50 miles southeast of Drumheller, a Calgary group headed by W. C. Fisher, president of Model Oils, Ltd. and Frank P. Byrne have taken over a block of 30,000 acres blanketing the structure both north and south of the Red Deer River, west of Steveville. No. 1 test will likely start drilling this month.

Northern Alberta

In the Clearwater district, northern Alberta, 40 miles east of McMurray, Dr. A. G. Hope has secured leases on 11,000 acres including the unfinished Weymarn No. 1 test in Township 89-3w4. The acreage will be tested by Western Development Co. of Edmonton which has sent a drilling crew and equipment to location.

Lloydminster Field

In the Lloydminster field, in eastern Alberta and western Saskatchewan, Triangle Oil & Gas Co. has spudded a new test about a half mile south of Lloydminster. J. B. Messenger is handling the drilling. The company is planning to drill several tests this season. Dina Oil & Refining Co. No. 1, LSD 14, section 9-45-1w4, has set 8-inch casing at 894 feet after striking a fair gas flow.

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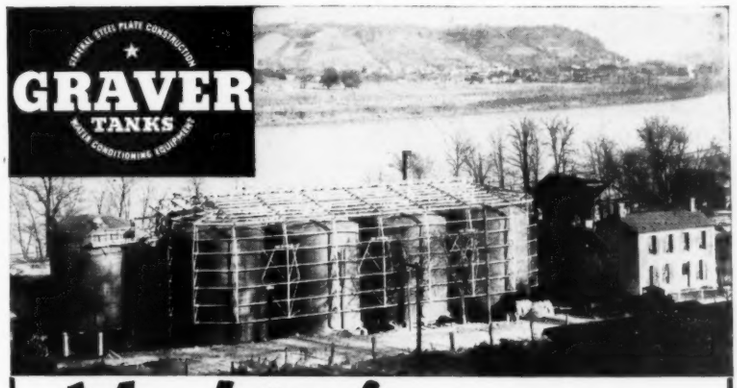

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West and North Texas

HOCKLEY COUNTY DISCOVERY SPURS INTEREST IN DISTRICT

By L. E. BREDBERG

FORT WORTH, Tex., May 3.—The Hockley County discovery of Texas Co. on the Slaughter ranch, in the southwestern corner of the county, in Labour 84, League 38, Zavalla County School Lands Survey, was retreated with 5,000 gallons and flowed 502 bbls. of oil through 2½-inch tubing in 24 hours. It logged the first oil at 4,968-73 feet, increasing from 4,980-5,025 feet where it was first shut down to test. Later it was drilled to 5,030 feet but showed water and was plugged back to 5,023 feet to shut it off. It was first acidized with 2,000 gallons, flowing 333 bbls. after that treatment.

This well opened Hockley County's first production and increased the lease and royalty play started in this northern sector of the West Texas district over a year ago when southeastern Yoakum County's first well was brought in, and which was increased when the southeastern Cochran County wildcat discovery was made. The Hockley County discovery is about 11 miles southeast of the Cochran County discovery. The adjoining counties, Hale, Lamb, Lubbock and Cochran, are all feeling the effects, and many wildcats are expected to be drilled.

Ellenberger Completion

The second Ellenberger field in the Permian Basin, opened about three weeks ago by Gulf Oil Corp. in No. 4 W. N. Waddell and others, section 4, Block B-27, P.S.L. Survey, in the Sand Hills area of western Crane County, will soon see the drilling of a second test when Gulf starts No. 5 Waddell, 1,980 feet from the south and east lines of the section, and a south offset to the discovery, which this week produced 513 bbls. of 44.6 gravity through 2½-inch tubing and two lines, one a three-fourths inch and the other a 1-inch, making a daily gas volume of 2,540,000 feet.

The northern Crane County discovery of Sinclair Prairie Oil Co. in the southwest quarter of section 13, Block 35, University lands, which either opens a new pool 2½ miles northwest of the Waddell field or which may connect to that field or with the small well 1¾ miles to the northwest in the northeast corner of section 12, same block and survey, was completed this week for an initial production of 380 bbls. of oil in 24 hours through 2½-inch tubing, following treatment with 5,000 gallons. It is on University lands, 2,310 feet from the south and west lines of the section, and is 1 mile west by a little south of a dry hole drilled in the northwest quarter of section 12 by the same company, given up as a failure at 3,623 feet. The new discovery will call for three immediate offsets, and will bring tests in adjacent sections.

Another possible extension in western Crane County is Gulf Oil Corp. No. 2 McKnight, in the northeast corner of section 9, Block B-21, about three-quarters of a mile northeast of a small producer of the company which opened this area to production a couple of years ago when drilled to 3,713 feet, but was plugged back to 3,604 feet and shut off water before completing. It made only 55 bbls. on the pump from pay topped at 2,895-3,575 feet. This second well in the section showed for another small producer from the same pay, but passed it up in quest of deeper production. It had a showing of oil and gas at 4,665-73 feet, an increase at 4,673-80 feet and more at 4,700 feet in sandy lime and is drilling. No. 1 McKnight is 2 miles north of a producer in section 18, producing from the Simpson and nearly 4 miles northeast of the new Ellenberger discovery, consequently the McKnight area has possibilities of producing from either or both of these deeper pay horizons in the Ordovician, and will be of great interest as it may mean a 4-mile extension to deep production.

Ellenberger Abandonment

Magnus Oil Co. has decided to abandon No. 1 Judkins & Spencer Ordovician test, about 14 miles east of Eldorado in eastern Schleicher County, but another company is planning a deep test only about 3 miles southeast.

The Magnus test, in section 4, W. W. Russell grantee Survey, was drilled to 6,527 feet, but plugged back to shut off water and acidize. It was given 7,500 gallons, but that too failed, although the well had plenty of oil and gas showing from the deeper lime. Elevation is 2,209 feet. The new test, to be drilled by Tex-Tor Oil Corp. of San Angelo, will be in section 33, Block A, A. & B. Survey.

Yoakum Tests

In the Bennett area in southeastern Yoakum County, opened over a year ago by C. J. Davidson and others on the Bennett ranch, and in which one other well had been completed, several tests are supposed to get under way. Moore Brothers Corp. of Midland has secured rights on the NE quarter of the SW of section 706 and the NE and SW quarters of section 731, Block D, J. H. Gibson Survey, about 11 miles west by south of the Bennett producers. A short distance west of the two producers in the Bennett pool, Honolulu Oil Corp., one of the three companies making the Bennett discovery, will drill in the NE quarter of section 677, Block D, and Siosi Oil Co. and Joe Crump are also expected to start tests offsetting the producers right away. The field does not have a pipe line outlet, which is responsible for the lack of drilling.

Ordovician for Jones

Humble Oil & Refining Co., which several months ago completed a wildcat failure in Jones County, is preparing to drill a 5,500-foot Ordovician test in the NE quarter of section 33, Block 18, T.&P. Survey, on the R. F. Teaff estate lands, east of the Noodle Creek field. Few major companies have prospected in wildcat territory in this county. This will be the deepest test drilled in the county.

Glasscock Wildcat

Moore Brothers of Midland are to start a wildcat in the northwest corner of Glasscock County, near the corners of Glasscock, Martin and Midland counties. It is to be drilled in the NW quarter of section 43, Township 1s, Block 35, T.&P. Survey, and on the F. A. King ranch. Contract depth is 3,750 feet, and the owners have a block of 14,940 acres surrounding the location. It is 2¾ miles south of a dry hole drilled in Martin County over a year ago.

Upton Wildcat

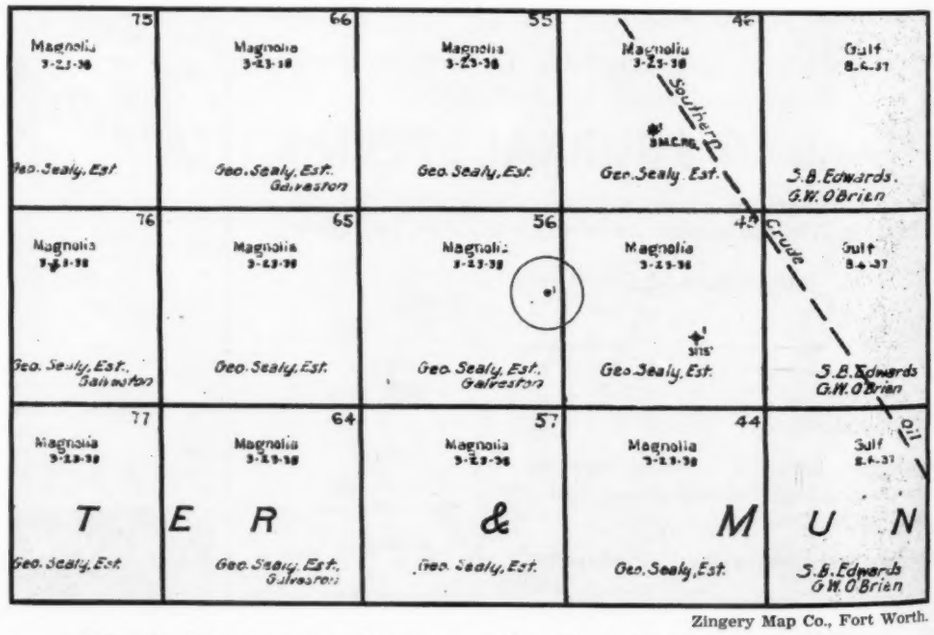
John W. Emch, San Angelo, has spudded a wildcat test on the extreme eastern side of Upton County and near the Reagan County line. It is in section 13, Block 58, University lands, about 8 miles northwest of the Big Lake field in Reagan County and approximately 10 miles northeast of Rankin. Contract depth is 3,800 feet. It is about 3 miles south of a test drilled by him in section 47, Block 7, which proved a failure at 3,740 feet. He also drilled a failure 3½ miles northeast of this new test, over in Reagan County, given up at 3,667 feet. Another failure was drilled by Texas Pacific Coal & Oil Co. 2¾ miles northwest of the new location, and another 3 miles to the south was given up at 3,428 feet by Big Mesa Oil Co. in section 17.

Ward County Possibility

Magnolia Petroleum Co. No. 1-55 Sealy, section 55, Block F, G.M.M.B.&A. Survey, in northern Ward County, is appearing as a half-mile extension to an area opened by the company several years ago by a small well, which last year was acidized and increased its production. The new test topped the lime at 2,880 feet, and the pay at 3,001 feet, drilling to 3,010 feet where it filled 1,800 feet with oil in four hours, but showed water when deepened. It is 1½ miles south of a discovery made this year by Dave Finley, Cherry and others on the same ranch, and may prove a link between the old Magnolia producer and that wildcat discovery. The area is about 3 miles west of the O'Brien field.

Andrews Anticipation

Another wildcat in the northwestern part of Andrews County is to be drilled by Empire Oil & Refining Co. in the southwest quarter of section 12, Block A-31, P.S.L. Survey, nearly 3 miles northwest of a failure recently abandoned by Hannigan on the Logsdon ranch, and about 2 miles northeast of a failure drilled to 4,808



Zingery Map Co., Fort Worth.

Magnolia Petroleum Co. wildcat in northern Ward County, new discovery

feet by Stogner and others on the Richards lands. Another wildcat is being drilled about 7 miles north, over in Gaines County, by Blevins & Sloan on the Barber ranch.

Loving Purchase

Pacific Western Oil Corp., controlled by J. Paul Getty and associates, entered the West Texas district this week by purchasing 24 sections in fee, in Block 75, Township 1, T.&P. Survey, in the northeastern part of Loving County.

North Texas

Phillips Petroleum Co. has completed its second, the third deep producer, in the Rock Crossing pool on the Waggoner pasture in Wilbarger County. This company's No. 193 Waggoner, section 43, Block 4, H.&T.C. Survey, flowed 95 bbls. per hour from lime logged at 3,052-70 feet, the new pay recently opened by the company in an old well which it carried deeper as an experiment. Since that well was discovered, a northeast offset was drilled in by Humble Oil & Refining Co., but a test 3 miles northwest, in the same field, drilled by Davis Oil Corp., proved a dry hole. Another deep test being closely watched, for if it makes a producer it will extend the new lime production 3 miles to the east and over into the old Greyback field in the Waggoner lands, is W. W. McDonald and others No. 3-A Waggoner, in section 26, Block 4, H.&T.C. Survey. It has already logged a showing of oil from 3,115-20 feet, drilling deeper in the lime.

There were 90 new locations staked in the North Texas district during the week, with 54 tests completed.

Jack County is getting more wildcatting. Everts Drilling Co., of Dallas, is moving in for a 4,000-foot test in section 833, on the Shawn lands, north of the town of Finis, about 10 miles south of the Bryson field.

WEST TEXAS COMPLETIONS

Crane County

American Liberty Oil Co. No. 4 Tubbs, 4,372-4,427 feet, 2,177 bbls. per day. Choate and others No. 1 Cordova-Union, 2,065-2,348 feet, plugged back to 2,144 feet, acidized, 18 bbls. on pump. H. & P. Oil Co. No. 2 Hughes, dry and abandoned 2,139 feet. Loffland Brothers No. 1 Tubbs, junked and abandoned 4,510 feet. Texas Co. No. 28 King, 2,325-2,510 feet, acidized and shot, 147 bbls.

Ector County

American Maracaico No. 2-A Scharbauer, 4,175-4,220 feet, acidized, 433 bbls. Broderick & Calvert No. 4 Foster, 4,040-4,180 feet, shot, 796 bbls. Landreth Oil Corp. No. 2-C Scharbauer, 4,170-4,226 feet, acidized, 608 bbls.; No. 3-C Scharbauer, 4,171-4,230 feet, acidized, 1,376 bbls.; No. 2-F Scharbauer, 4,159-4,214 feet, acidized, 2,132 bbls.; No. 1-I Scharbauer, 4,160-4,215 feet, acidized, 844 bbls. D. F. Nysewander and others No. 1 Scharbauer, 4,161-4,230 feet, acidized, 208 bbls. Shasta Oil Co. No. 1-C Scharbauer, 4,163-4,228 feet, acidized, 1,168 bbls. Stanolind Oil & Gas Co. No. 46 Cowden, 4,105-4,304 feet, plugged back to 4,258 feet, shot, 245 bbls.

Howard County

Sinclair Prairie Oil Co. No. 7-B Davis, 2,470-2,825 feet, shot, 794 bbls. swabbing and flowing.

Loving County

Sinclair Prairie Oil Co. No. 4-C Wheat, 4,327-42 feet, 76 bbls.

Pecos County

Bahan & Rhodes No. 1-B Bonebrake, dry and abandoned 2,502 feet, elevation 2,562 feet. Cardinal Oil Co. No. 12-A Cornell, 327-473 feet, plugged back to 451 feet, 11 bbls. on pump.

Union County

Cardinal Oil Co. No. 3 Sherk, 2,175-2,250 feet, acidized, 689 bbls. George Farley No. 2 Shell-Estep, 2,260-80 feet, acidized, 173 bbls. on pump. Humble Oil & Refining Co. No. 6 Reese, 2,560-2,640 feet, acidized, 294 bbls. on pump. Texas Pacific Coal & Oil Co. No. 9-E Lane, 2,215-75 feet, acidized, 601 bbls.

Ward County

Gulf Oil Corp. No. 16 Estes, 2,509-2,665 feet, shot, 1,303 bbls. Humble Oil & Refining Co. No. 14 Richter, 2,579-2,612 feet, shot, 663 bbls.; No. 14-F University, 2,586-2,753 feet, shot, 824 bbls. Lindsay & Bolin No. 3-B Hartage & Wilson, 2,362-87 feet, 204 bbls. Provine & O'Quinn No. 1 Aguilar, 2,145-2,210 feet, shot, 38 bbls. Sinclair Prairie Oil Co. No. 8 Archenhold, 2,875-3,060 feet, acidized, 378 bbls. Skelly Oil Co. No. 4 Martin, 2,710-

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2,950 feet, shot, 442 bbls. Tide Water Associated No. 1" Johnson, 2,554-2,674 feet, shot, 5,486 bbls.; No. 20 Johnson, 2,585-2,705 feet, shot, 4,184 bbls.

Winkler County

Harry Adams and others No. 2-B Thompson, 2,788-3,091 feet, shot, 2,786 bbls. Atlantic Refining Co. No. 4-D Leck, 3,017-60 feet, 1,480 bbls.; No. 6 Lovett, 2,800-3,157 feet, shot, 858 bbls. Bert Fields and others No. 7 Pure-Clapp, 2,740-3,124 feet, shot, 1,709 bbls. Gulf Oil Corp. No. 32 Daugherty, 2,810-3,130 feet, shot, 1,039 bbls. Humble Oil & Refining Co. No. 10-C Colby, 2,804-3,055 feet, shot, 1,084 bbls.; No. 6 McCutcheon, 2,805-3,015 feet, shot, 982 bbls. Illinois Oil Co. No. 14-B Central State Bank of Abilene, 2,788-3,118 feet, shot, 1,164 bbls. Magnolia Petroleum Co. No. 9 Colby, 2,910-3,136 feet, shot, 339 bbls.; No. 70 Walton, 2,810-2,916 feet, shot, 579 bbls. through seven-eighths inch choke; No. 71 Walton, 2,702-2,849 feet, shot, 276 bbls. through seven-eighths inch choke; No. 72 Walton, 2,845-2,922 feet, shot, 351 bbls. Sinclair Prairie Oil Co. No. 3-A Walton, 3,310-3,402 feet, shot, 293 bbls. Texas Pacific Coal & Oil Co. No. 18 Daugherty, 2,850-2,955 feet, shot, 292 bbls.

WEST CENTRAL TEXAS COMPLETIONS

Callahan County

A. R. Forster No. 1 C. B. Snyder, 1,185 feet, junked and abandoned. Mesa Verde Oil Co. No. 1-B Alvord, total depth 1,040 feet, dry and abandoned.

Eastland County

H. H. Schwarts No. 1 J. H. Hearn, 3½ miles northeast Carbon, 1,607 feet, dry and abandoned.

McCulloch County

Curtis Norman and others No. 1 M. A. Rice, total depth 935 feet, dry and abandoned.

Jones County

Fain & McGaha Oil Corp. No. 1 Claude Lewis, 5½ miles northeast Hawley, sand show oil 1,914-17 feet, oil sand 1,923-32 feet, initial production 25 bbls. T. D. Humphrey, 2,069-73 feet, initial production 549 bbls.

Shackelford County

Dean Brothers and others No. 1-C W. P. Newell, total depth 1,402 feet, dry and abandoned. Thomas Wittmer No. 1 Lone, total depth 772 feet, dry and abandoned.

Stephens County

Clark & Cowden and others (W. T. Garrett) No. 1 Echols Heirs, gray lime 3,113-3,310 feet, slight show oil, sand 3,695-3,725 feet, show oil and gas, shot with 720 quarts, no results, gas sand 3,860-67 feet, had saturated oil sand 3,877-80 feet, 16,780,000 feet gas, 50 pounds back pressure on casing, 1,460 pounds shut-in pressure. Snowden & McSweeney No. 12 G. P. Jones, 3,124-62 feet, 3,000 gallons acid, 47 bbls.

Taylor County

Dunn & McAlister No. 1 Bowles, NE corner county, oil show 1,750-52 feet, initial production 3 bbls., 39 gravity.

NORTH TEXAS COMPLETIONS

Archer County

L. T. Burns No. 6 W. D. Pace, 1,261-75 feet, 10 bbls. Carbo Oil Corp. No. 1 Mrs. O. Slopansky, 2,300 feet, dry. J. D. Carpenter No. 1 J. D. Carpenter, 1,068 feet, dry. Golding & Cochran No. 10 B. R. Jeske A, 1,176-90 feet, 35 bbls.; No. 1 J. M. Kunkel, 1,145-58 feet, 38 bbls. Humble Oil & Refining Co. No. 1 E. A. Herndon, 1,760 feet, dry. King Oil Co. No. 9 J. J. Perkins, 986-1,000 feet, 25 bbls. J. G. Steele No. 1 N. I. Andrews, 884-901 feet, 100 bbls.

Baylor County

Consolidated Oil Co. No. 20 W. H. Portwood R, 1,440 feet, dry.

Clay County

Bridwell Oil Co. No. 9 Saner, 300 feet, dry. Texas Co. No. 4 J. B. L. Hansard, 1,082-1,102 feet, 70 bbls.

Cooke County

Dove Oil Co. No. 8 J. A. Carr, 1,935-64 feet, 440 bbls. Kingery Brothers and others No. 1 H. Henscheid, 758-63 feet, 12 bbls. E. W. Merrick, Inc. No. 36 A. Knabe, 800-1,000 feet, 8 bbls. Mudge Oil Co. No. 19 A. Johnson, 1,111-40 feet, 20 bbls. A. D. Robinson No. 5 J. H. Otto A, 784-96 feet, 10 bbls. Schermerhorn Oil Co. No. 5 Mary Kessler, 798-904 feet, 25 bbls. Seitz and others No. 20 R. W. Trew A, 1,176-1,284 feet, 45 bbls. United Production Co. No. 9 R. W. Trew, 1,642 feet, dry.

Denton County

Harry Culver No. 1 Charles Waite, 1,909 feet, dry. A. A. Lander, Inc. No. 1 E. W. Forrester, 1,648-52 feet, 66 bbls.

Grayson County

Pete Shaner No. 1 Blair, 3,558 feet, dry.

Jack County

Brazos River Gas Co. No. 4 Jones, 2,922-89 feet, 6,000,000 feet gas. Deep Oil Development Co. No. 4 Bridwell, 2,964-3,013 feet, 200 bbls. Hamilton Petroleum Co. No. 1 Mrs. M. A. Sampley, 2,906-3,251 feet, 2,500,000 feet gas. Hammon & Herbert Oil Co. No. 3 Rhodes, 2,426 feet, dry. T. D. Humphrey No. 1 M. B. Cooke A, 2,825-47 feet, 25 bbls.; No. 4 G. T. Smith, 2,935-75 feet, 75 bbls. Indiana Oil Co. No. 1 Bryson, 2,950-3,000 feet, 300 bbls. Kimberlin No. 1 Howse, 3,000-80 feet, 50 bbls. Panhandle Refining Co. No. 5 M. B. Cooke, 2,930-80 feet, 100 bbls.

Montague County

Lesh & McCall No. 15 R. W. Cunningham A, 900-26 feet, 100 bbls. N. H. Martin & Son No. 3 Mrs. M. Salmon, 1,000-20 feet, 25 bbls. Perkins & Cullum No. 1 Mrs. M. H. Salmon, 903-16 feet, 60 bbls.; No. 2 Mrs. M. H. Salmon, 900-27 feet, 55 bbls.; No. 3 Mrs. M. H. Salmon, 896-921 feet, 15 bbls. Pure Oil Co. No. 5 W. W. Jones A, 870-95 feet, 30 bbls. Texas Co. No. 3 Mrs. A. B. Hinton, 856 feet, dry.

Wilbarger County

Magnolia Petroleum Co. No. 42 W. R. Piper, 1,902-15 feet, 15 bbls.

Wichita County

Bridwell Oil Co. No. 7 W. B. Honaker, 1,070 feet, dry. C. W. Clark and others No. 9 Allen & Kemp B, 1,230-40 feet, 10 bbls. G. W. Cooper No. 19 Waggoner C, 1,609-15 feet, 210 bbls. E. B. Madden No. 15 fee, 563-75 feet, 5 bbls. H. G. Mitchell No. 1 Fassett, 880-90 feet, 15 bbls.

(Continued on Page 102)

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Oklahoma Operations

By
DAL DALRYMPLE

WILDCAT ACTIVITY GAINING; TWO LARGE BILLINGS WELLS

Outpost operations continue to increase in Oklahoma, several new wildcats being started the past week. Work has been resumed at some tests that have been idle for several weeks, and several interesting deep tests are nearing expected pay levels.

One of the new wildcats is in Pottawatomie County, in a promising area 6 miles southwest of Tecumseh. The Amerada and Stanolind companies have started work at No. 1 Billington, SW SE SW section 32-9-3e, following a series of seismograph surveys.

Location for an outpost in Okfuskee County, north of the Olympic field, has been announced by Earl A. Davis and Exchange Drilling Co. It is their No. 1 Lehmer, NE NE NW section 29-11-9. It is to test Cromwell sand, but may be carried to the Wilcox horizon.

The area between the Fitts and Beebe pools in Pontotoc County is to be tested by Summit Drilling Co. at No. 1 Whitaker, C NW NE section 31-4-6, about one-half mile west of Ada. It will be a Wilcox sand test.

Work has been resumed at the Caloma Oil Co. No. 1 Brentz, SE NE SW section 4-1n-6e, wildcat southwest of the Fitts field in Pontotoc County, which was shut down for some weeks and previously was announced as abandoned. It was drilling below 900 feet.

Penn Oil & Gas Co. and others No. 1 Cole, C SW NW section 21-2n-26w, Harmon County outpost, drilled to contract depth of 4,500 feet without finding pay, but an agreement was made to drill another 1,000 feet and work was resumed.

Carter Oil Co. and others No. 1 Harley, C NE NE section 24-2s-4w, closely watched wildcat west of the Fox field of Carter County but in Stephens County, was drilling ahead in Sylvan shale at around 5,100 feet.

On the other side of the state, work has started at a wildcat that will be of considerable interest. It is Continental Oil Co. No. 1 Anderson, section 33-8-20, east of Kinta, Haskell County. It may be drilled to 7,000 feet, or deeper.

Completions of the week include a big producer in the Moore field, Cleveland County; two good wells in the Billings pool, Noble County; and large wells in the Fitts field, Pontotoc County, the Sporn area, Lincoln County, and the Logan County extension of the Lucien field.

Pontotoc County

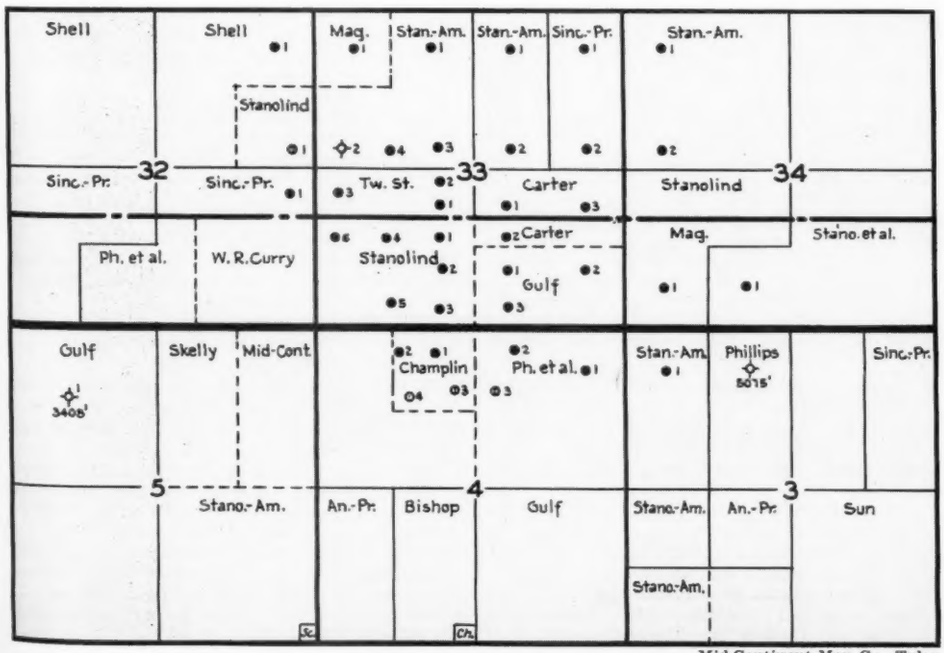
Six new producers were completed in the Fitts field, Pontotoc County. Amerada Petroleum Corp. No. 11 Woolley, SE NE SE section 21-2n-7, topped Hunton lime at 3,558 feet; Sylvan shale, 3,938 feet; total depth, 3,941 feet; acidized, flowed 335 bbls. of oil in three hours and made potential of 3,120 bbls.

Skelly Oil Co. No. 20 Park College, SW NW NE section 28-2-7, had Hunton lime at 3,341 feet; Sylvan shale, 3,610 feet; total depth, 3,612 feet; acidized, flowed 281 bbls. of oil in one and one-half hours and made potential of 2,932 bbls. Same company's No. 21 Park College, SE NE NW section 28-2-7, flowed 323 bbls. of oil in 2 hours 40 minutes after acid treatment and made potential of 3,181 bbls. of oil. Top of Hunton lime was 3,356 feet; Sylvan shale, 3,619 feet; total depth, 3,622 feet.

Magnolia Petroleum Co. No. 4 Morin, SE NE SE section 20-2-7, was acidized and flowed 525 bbls. of oil gross in one hour, making potential of 3,271 bbls. It found Hunton lime at 3,667 feet; Sylvan shale, 3,997 feet, and was bottomed at 3,999 feet.

Sinclair Prairie Oil Co. No. 22 Woolley B, SW NE SW section 22-2-7, had Hunton lime at 3,575 feet and was bottomed at 3,685 feet. After acid treatment, it flowed 675 bbls. of oil in two hours, making potential of 3,457 bbls.

E. H. Moore and others No. 11 Akers, SW NW NE section 32-2-6, had Hunton lime at 3,515 feet; Sylvan shale, 3,792 feet; total depth, 3,795 feet. It was acidized and flowed 161 bbls. of oil gross in one hour; reacidized, flowed 310 bbls. in 2 hours 15 minutes and made poential of 2,654 bbls. Same operators' No. 4 Smith B, NE cor. section 36-2-6, an old well, was plugged back from 4,333 feet, total depth, to 4,282 feet, pumped 105 bbls. of oil and 234 bbls. of water in 24 hours and was recompleted. Phillips Petroleum Co. No. 2 Bates, NW NE NW section 26-2-7, an old well, was deepened from 3,695 feet to 3,812 feet, acidized two times and made potential of 2,311 bbls. of oil, recompleted.



Mid-Continent Map Co., Tulsa.

Champlin Refining Co. completed a large well at the south end of the Lucien field, section 4-19-1w, Logan County extension

Estimated Daily Production

Estimated daily average production of Oklahoma for the week ending May 1, and for the preceding week, was as follows:

	Barrels	
	May 1	Apr. 24
Allen	6,225	6,325
Burbank	7,850	7,675
South Burbank	16,275	16,150
Balance Osage	22,000	21,500
Blackwell district	5,250	5,125
Bristow-Slick	7,725	7,725
Chandler	3,150	3,450
Crescent	14,825	15,925
Cromwell	3,500	3,200
Cushing-Shamrock	10,250	10,275
Duncan district	3,775	3,750
Edmond	19,000	22,700
Fish	5,825	6,150
Fitts	96,500	98,900
Jesse	3,675	3,725
Graham	4,725	4,725
Gray	1,250	1,325
Healdton	9,725	9,750
Hewitt	4,500	4,475
Holdenville	925	950
Keokuk	9,450	9,525
Lucien	14,500	13,650
Moore	15,825	15,800
Oklahoma City	174,525	172,400
Olympic	15,125	15,525
Papoose	925	900
Polo	1,550	1,650
Sasakwa and townsite	3,150	3,125
Sholem-Alechem	3,025	3,125
Seminole:		
Bowlegs	11,400	11,650
Carr City	5,875	5,950
Earlsboro	6,500	6,575
South Earlsboro	675	675
East Earlsboro	7,600	7,700
Little River	11,025	11,025
East Little River	1,200	1,200
Maud	800	750
Mission	2,200	2,250
Seminole	9,900	9,625
East Seminole	3,250	3,300
Searight	4,925	4,850
Total Seminole	65,350	65,550
St. Louis-Pearson	22,825	21,925
Tatums	5,000	4,950
Tonkawa-Garber-Thomas	10,050	10,150
Wewoka	3,225	3,450
Yale-Jennings	4,275	4,150
Other pools	69,850	70,975
Total Oklahoma	665,600	670,650

Other Districts

In the Allen area, Larsen and others No. 2 Robinson, NE SW SW section 23-5-8, had Allen sand at 751 feet; total depth 773 feet; shot and pumped 3 bbls. of oil in 24 hours.

W. A. Delaney and others No. 1 McClure, SW SW NW section 22-5-5, topped Dolomite at 2,720 feet and was dry and abandoned at 2,740 feet, total depth. Senora Oil & Gas Co. No. 1 Burke, NW SW NW section 33-5-5, an old well, was deepened from 2,555 feet to 2,577 feet; sulfur water intruded, it was plugged back to 2,552 feet, pumped 167 bbls. of oil in 24 hours and was recompleted.

New work in Pontotoc County: Francis Oil Co. and others No. 1 Provence, SW NW NW section 2-1n-7, cellar and pits; Mid-Continent Petroleum Corp. No. 5 Statler SW NE SW section 2-1n-7, building rig; Continental Oil Co. No. 5 McCarty, NW SE NW section 12-1n-7, location; same company's No. 6 McCarty, C SE NW section 12-1n-7, location; Roodhouse and others No. 1 Booth, SE NW SE section 20-2-6, wildcat, location; Loual Drilling Co. No. 3-A Craddock, SW NE NE section 25-2-6, location; Sinclair Prairie Oil Co. No. 2 Vivian, NW SE NW section 22-2-7, moving in rig; E. H. Moore No. 2-B Woodruff, NW NE SE section 29-2-7, rigging up rotary; same operator's No. 6-B Woodruff, SE NE SE section 29-2-7, location; same operator's No. 7-A Woodruff, SW NE SE section 29-2-7, location; same operator's No. 8-A Woodruff, SE NW SE section 29-2-7, location; W. A. Delaney

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No. 1-B Simpson, NE NW NE section 20-4-8, location: Clark Drilling Co. and W. A. Delaney No. 1 Richardson, SE SE NW section 30-4-8, location; W. A. Delaney No. 1 Starrett, SW SE NE section 21-5-5, an old well, moving in machine to deepen; Benedum-Trees Oil Co. No. 10 South Mole, NE NW NE section 31-5-5, building rig; Mary F. Oil Co. and others No. 1 Miller, SW NW SW section 15-5-8, total depth 590 feet, running 8-inch casing.

Seminole County

Two producers were completed in the North Bethel pool, Seminole County. Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Billington, NE NE SE section 35-10-7, had Cromwell sand at 3,650 feet; total depth, 3,660 feet, and made potential of 1,319 bbls. of oil. Texas Co. No. 1 Williams, SE NW SW section 25-10-7, had Cromwell sand at 3,623½ to 3,626 feet, total depth, and swabbed 60 bbls. of oil and 50 bbls. of water in 24 hours; later, pumped 80 bbls. of oil and 25 bbls. of water in 24 hours.

In the Wetley pool, Francis Oil Co. No. 3 Wetley, SW SE NE section 24-5-5, found Hunton lime at 2,355 feet; Sylvan shale, 2,540 feet; total depth, 2,541 feet. It swabbed 41 bbls. of oil in 16 hours; was acidized and flowed 154 bbls. in 24 hours.

Amerada Petroleum Corp. and others No. 4 Parks, SW SE SW section 35-11-5, North Earlsboro sector, swabbed 745 bbls. of oil in 13½ hours from Wilcox sand topped at 4,637 feet; total depth 4,645 feet.

In the Searight area, Wood Oil Co. No. 1 Mayhue, NE cor. section 14-9-6, found Hunton lime at 3,990 feet; Sylvan shale, 4,023 feet, and was bottomed at 4,024 feet. It was acidized and flowed 1,000 bbls. of oil gross in 20 hours; reacidized and pumped 224 bbls. of oil net in 24 hours, cutting 2 per cent water.

B. F. Green and others No. 4 Spillman, NE SW SW section 7-6-8, topped Gilcrease sand at 2,757 feet; total depth, 2,845 feet, was shot and pumped 10 bbls. of oil in 24 hours.

T. H. Ottesen and others No. 1 Norvell, SE NE SE NE section 34-11-8, Cromwell field, was dry and abandoned at 2,002 feet, total depth.

Old Wells Deepened

Carter Oil Co. No. 1 Tewee, SW NW NE section 14-7-6, an old well, was deepened from 4,347 feet to 4,401 feet, acidized and pumped 30 bbls. of oil and 300 bbls. water in 24 hours. Winona-Jarvis-Holmes No. 3 Myers, NE SW NE section 31-7-8, an old well, was plugged back from 4,216 feet to 3,190 feet, water predominated and it was abandoned. Texas Co. No. 8 Mayhue, SE NE NW section 14-9-6, an old well, was deepened from 3,935 feet to 4,168 feet and pumped 75 bbls. of oil in 24 hours, recompleted. Carter Oil Co. No. 1 Parsons, C E half NW SW section 14-10-6, an old well bottomed at 4,198 feet, was acidized and made potential of 2,260 bbls. of oil, with a trace of water.

First reports of new work in Seminole County: Sinclair Prairie Oil Co. No. 2 Caesar, SW SE SW section 21-6-6, building rig to deepen; Paul Traugh No. 1 Dotson, NE SE SE section 22-6-6, building rig; Sinclair Prairie Oil Co. No. 2 Kouri, SW SE SE section 13-7-6, an old well, pulling 5-inch casing Carter Oil Co. No. 2 Lorney, SW NW NW section 24-7-6, an old well, standardizing to deepen; Tide Water Oil Co. No. 3 Nelly, SE NE SE section 12-8-5, an old well, plugging back to test Hunton lime; Magnolia Petroleum Co. No. 2 Carolina, SW SW NW section 14-8-7, an old well deepened from 3,196 feet to 3,242 feet, where 7-inch casing collapsed; Seminole Oil & Gas Co. No. 1 Ong, SE SE NE section 28-8-7, location; Superior Oil Corp. No. 1-A Ingram, SW NW NW section 1-9-5, rig; Carter Oil Co. No. 1 Black, C NE SW section 14-10-6, an old well deepened and acidized, waiting on results; Amerada Petroleum Corp. and others No. 1 McLaren, SW NW NE section 36-10-7, cellar and pits; Sinclair Prairie Oil Co. No. 1 Miles, NE NE SE section 29-10-8, cellar and pits.

Oklahoma County

Phillips Petroleum Co. No. 5 Stiles, NE NE NW section 34-12-3w, Oklahoma City field, Oklahoma County, flowed 543 bbls. of oil in three hours, making potential of 4,194 bbls. Top of second Wilcox sand was 6,375 feet; total depth, 6,607 feet.

Bryan Petroleum Co. No. 2 Howe's Capitol, NE NW SE section 27-12-3w, had Wilcox sand at 6,364 feet, was bottomed at 6,514 feet, flowed 426 bbls. of oil in three hours, making potential of 4,152 bbls.

In the Edmond area, Texas Pacific Coal & Oil Co. No. 1 Tegtmyer, NE SE SE section 36-14-4w, topped Simpson Dense at 6,491 feet; was bottomed at 6,711 feet; plugged back to 6,670 feet, pumped 193 bbls. of oil a day; later pumped 53 bbls. of oil and 32 bbls. of water in eight hours and was completed.

Ohio Oil Co. No. 4 Dahl, Account 2, SW NE SW section 31-14-3w, topped first Wilcox sand at 6,595 feet; second Wilcox sand 6,668 feet; total depth 6,690 feet; was shot and flowed 360 bbls. of oil in four hours, making potential of 2,160 bbls.

New work in Oklahoma County: Sunray Oil Co. No. 1 Dickson, NW cor. section 17-11-1e, wildcat, cellar cemented; Sinclair Prairie Oil Co. No. 7 Stamper, SE SE NW section 30-11-2w, digging cellar; Olson Drilling Co. No. 1 Jones, NE SE SW section 15-12-3w, drilling at 2,640 feet; Clark & Co. No. 1 Warsaki, NE SE SW section 15-12-3w, spudded; Larkins & Warr No. 1 Military, NE NE SW section 34-12-3w, drilling at 6,300 feet.

Okfuskee County

Seven new producers were completed in the Olympic field, Okfuskee County. Sinclair Prairie Oil Co. No. 8 Fisher, NW NW SW section 19-10-9, had Senora sand at 1,866 feet; total depth 1,881 feet; was shot and swabbed 100 bbls. of oil and 10 bbls. of water in 24 hours. Same company's No. 1 Phillips, NE SE NE section 24-10-8, was shot and swabbed 97 bbls. of oil and 10 bbls. of water in 24 hours from Senora sand at 1,876 feet, total depth 1,886 feet.

Manahan Oil Co. No. 8 Oliphant B, SW NE SE section 11-9-8, had Senora sand at 1,771-77 feet, total depth, was shot and pumped 35 bbls. of oil in 24 hours. Same operator's No. 18 Dalton, NW SW SE section 36-10-8, had Senora sand at 1,723 feet, was bottomed at 1,731 feet, and pumped 40 bbls. of oil in 24 hours after a shot.

Chapman & McFarlin No. 1 Dunn, SE NW NW section 18-10-9, found Senora sand at 1,848 feet; total depth 1,888 feet; plugged back to 1,884 feet, was shot and pumped 21 bbls. of oil and 28 bbls. of water in 24 hours.

Blackwell Oil & Gas Co. and Phillips Petroleum Co. No. 3 Lehmar B, SE SW SW section 18-10-9, pumped 31 bbls. of oil and 17 bbls. of water in 24 hours from Senora sand at 1,872 feet; total depth 1,894 feet.

Ark Royalty Co. No. 11 Fisher, NE SW SE section 18-10-9, topped Senora sand at 1,867 feet, was bottomed at 1,902 feet, was shot and swabbed 12 bbls. of oil in 24 hours.

J. J. Deaner No. 1 Schultz, SE SE NW section 18-10-9, an old well, was deepened from 1,887 feet to 1,895 feet, shot, pumped 94 bbls. of oil in 24 hours and was recompleted.

New Okfuskee County operations were as follows: Ark Royalty Co. No. 14 Fisher, SW SW SE section 18-10-9, cellar and pits; Sinclair Prairie Oil Co. No. 1 Cohee, NW SW NW section 19-10-9, cellar and pits; same company's No. 5 Palmer, NW NE NW section 19-10-9, location; L. Stekoll and others No. 3-A Barnett, SW NE NE section 2-10-11, drilling at 500 feet; Deep Rock Oil Corp. No. 5 Palmer, SW SE SE section 23-12-11, location.

Osage County

Carter Oil Co. and others No. 5 Mosier, NE SE SW section 34-26-6, South Burbank pool, Osage County, found Bartlesville sand at 2,795 feet; total depth, 2,864 feet; was shot, flowed 312 bbls. of oil in five hours, and was estimated as a 650-bbl. per day producer. Coralena Oil Co. No. 7 Swanson, NE SW NW section 21-25-6, had a hole full of water and was dry and abandoned at 2,820 feet, total depth.

Lewis Production Co. No. 3 Osage, NW NE NE section 33-24-7, Naval Reserve pool, had Bartlesville sand at 2,578 feet, was bottomed at 2,659 feet, shot and flowed 171 bbls. of oil in 24 hours.

L. E. Mertz No. 7 Osage, SE cor. section 8-21-9, had sand at 278-314 feet, total depth, and pumped 15 bbls. of oil daily.

Indian Territory Illuminating Oil Co. No. 8 Osage, SE SW NE section 36-23-10, an old well, was deepened from 1,725 feet to 1,744 feet, plugged back to 1,732 feet and pumped 1½ bbls. of oil daily.

Wolverine Oil Co. and others No. 47 North Avant Unit, SW SE NE section 31-24-12, was completed as a gas input well at 1,770 feet.

Morrison & Alexander No. 7 Osage, C W half E half SE section 35-25-11, topped Bartlesville sand at 1,655 feet; total depth 1,686 feet, and was completed as a 25-bbl. per day pumper.

Sun Oil Co. No. 1 Osage, SW SW NE section 18-24-10, an old well, was deepened from 2,102 feet to 2,199 feet, plugged back to 2,150 feet and was dry and abandoned. Gulf Oil Corp. No. 6 Bearcat, NE NW NW section 20-22-10, an old well, was deepened from 1,808 feet to Mississippi lime at 1,850 feet; total depth 1,856 feet, flowed 200 bbls. of oil and 20 bbls. of water daily, recompleted. Kewanee Oil & Gas Co. No. 12 Osage, NW NE SW SW section 28-21-12, an old well, was deepened from 1,303 feet to 1,319 feet, shot and pumped 2 bbls. of oil daily, recompleted.

Osage County operations reported for the first time

were: Midco Oil Corp. No. 26 Osage, NE NW SE section 18-22-10, moving in machine; same operator's No. 1 Osage, SE SE NW section 22-23-6, wildcat, location; Lewis Production Co. and Peters Petroleum Corp. No. 7 Smith, NE SE SE section 28-24-7, rigging up rotary; Coralena Oil Co. No. 12 Osage, SW NE SW section 15-25-6, location; Phillips Petroleum Co. No. 16 Osage, NE cor. section 11-25-11, location; Cecil Guby No. 8 Osage, NE NW NW section 12-27-10, location; Indian Territory Illuminating Oil Co. No. 382 Osage, SW SW SE section 34-27-11, an old well, preparing to deepen; Keener Oil & Gas Co. No. 27 Osage, SE SW NE section 15-29-10, location.

Noble County

Continental Oil Co. No. 1 Nora Conway, SE SE NW section 21-23-2w, Billings pool, Noble County, had Wilcox sand at 4,304 feet; total depth, 4,322 feet; flowed 672 bbls. of oil in six hours and made potential of 2,692 bbls.

Phillips Petroleum Co. and Shell Petroleum Corp. No. 9 McCaughtry, SW SW NE section 21-23-2w, topped Wilcox sand at 4,295 feet, was bottomed at 4,323 feet, flowed 632 bbls. of oil in six hours, making potential of 2,393 bbls.

In the North Lucien area, Shell Petroleum Corp. and others No. 1 Guthrie Community, C NW SW section 31-21-2w, topped first Wilcox sand at 5,382 feet; second Wilcox sand 5,420 feet; total depth 5,500 feet; plugged back to 5,462 feet; swabbed and flowed 70 bbls. of oil and 10 bbls. of water in six hours, making potential of 219 bbls. of oil, with 39 bbls. of water.

Tide Water Oil Co. No. 1 Jane Shaffer, NW NE SW section 21-23-2w, the only new operation in Noble County, was digging cellar.

Logan County

Champlin Oil & Refining Co. No. 2 Pfeiffer, C N half N half NW section 4-19-2w, Logan County extension of the Lucien field, flowed 3,664 bbls. of oil in 12 hours, making potential of 6,888 bbls. Top of first Wilcox sand was 4,836 feet; second Wilcox sand, the producing horizon, 4,912 feet; total depth, 5,024 feet.

In the Crescent area, Phillips Petroleum Co. No. 1 Channell, NE NE NW section 33-17-4w, had Simpson Dense at 6,460 feet; total depth 6,565 feet; flowed 301 bbls. of oil in four hours, making potential of 1,466 bbls.

Two new tests in Logan County were reported. Freeland and others No. 1 Woods, SE SE SW section 28-17-1e, had rig on ground. Royden Oil Co. No. 1 Langston, SE NW SE section 13-17-1w, had built rig corners.

Lincoln County

A large producer was completed in the Sporn area, Lincoln County, at Skelly Oil Co. No. 1 West Sporn, SW NW SW section 21-17-3e. It topped second Wilcox at 4,639 feet; total depth 4,654 feet; plugged back to 4,644 feet, perforated casing and flowed 2,301 bbls. of oil through tubing choke in 24 hours.

Amerada Petroleum Corp. No. 2 James, SE SE SW section 35-13-5, was location for a new Lincoln County test.

Pottawatomie County

The largest of two wells completed in the St. Louis field, Pottawatomie County, was Sinclair Prairie Oil Co. No. 6 Deatheridge, NE NW NW section 28-7-4. It topped Viola lime at 4,085 feet; Dense 4,125 feet; Dolomite 4,161 feet; total depth 4,197 feet; plugged back to 4,190 feet, acidized and swabbed 465 bbls. of oil gross in 13 hours; later swabbed 650 bbls. of oil and 50 bbls. of water in 24 hours.

Hilton Phillips No. 1-A Bradshaw, SW SW SE section 21-7-4, had sand at 3,525 feet; total depth 3,982 feet, and pumped 15 bbls. of oil in 24 hours.

Magnolia Petroleum Co. No. 2 Green, NE SW NW section 13-7-4, was dry and abandoned at 4,302 feet, total depth.

E. W. Jones and others No. 1 Junk, NE SE NW section 5-10-4, was rigging up rotary. Tom Phillips, Arrow Drilling Co. and others No. 1 Cassey, C W half SE NE section 23-11-6, an old well, was plugging back.

Garvin County

O. C. Myers and others No. 1-A Howell, C SE NW section 34-1n-1e, Garvin County wildcat, was temporarily abandoned at 4,013 feet, total depth, in black shale of lower Pennsylvanian age. This well originally was reported as Hayes Drilling Co. No. 1 Howell.

Wright-Smith Oil Co. No. 3 Yates, SE NW SW section 33-1n-3w, Tussy area, lost the hole at 2,375 feet and was abandoned.

Two new Garvin County tests were reported. Winkler & McQueen No. 3 Perkins, SW SW NE section 32-1n-3w, and S. Westheimer No. 1-A Pearce, NW NE SW section 13-1n-3w, were locations.

Hughes County

Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Chapman, SE SE NE section 36-9-8, Adams pool, Hughes County, topped Misener sand at 4,014 feet; total depth 4,025 feet; plugged back to 4,019 feet; was shot and swabbed 65 bbls. of oil and 20 bbls. of water in 24 hours.

Empire Oil & Refining Co. No. 2 Born B, NE NW SW section 20-7-8, was building rig. Berry Oil Co. No. 3 Moore, C W half NE NE section 22-7-8, was rigging up rotary.

Cleveland County

Sinclair Prairie Oil Co. No. 2 Bagby, Community 36, NE SW NW section 27-10-2w, Moore pool, Cleveland County, topped second Wilcox sand at 7,305 feet; total depth 7,309 feet. It was acidized and flowed 1,799 bbls. of oil in four hours, making potential of 10,119 bbls., with gas averaging 20,750,000 feet.

Creek County

Four small producers were completed in Creek County. L. B. Jackson No. 1-A Kelly, SE NE NW section 2-17-8, had Bartlesville sand at 2,690 feet; total depth 2,720 feet; was shot and pumped 31 bbls. of oil and 95 bbls. of water in 24 hours. Same operator's No. 5 Nolan, SW NW NE section 2-17-8, produced 15½ bbls. of oil and 125 bbls. of water from Bartlesville sand at 2,690-2,732 feet, total depth. Same operator's No. 3 Whitehead, SE SE NE section 35-18-8, had Jones sand at 1,613 feet, was bottomed at 1,628 feet, shot and pumped 5 bbls. of oil and 5 bbls. of water in 24 hours. J. P. Brady & Sons No. 1-A Carothers, C N half SE SE section 18-19-9 pumped 12 bbls. of oil daily from Skinner sand at 2,204 feet and Red Fork sand at 2,329 feet; total depth 2,346 feet.

Johnson Oil Refining Co. No. 5 Flinchum Estate, NW NE SW section 11-19-9, had a hole full of water at 2,995 feet, total depth, and was dry and abandoned.

New work in Creek County: Sinclair Prairie Oil Co. No. 8 Tucker, SW SW SE section 3-17-7, an old well, rigging up standard tools to deepen; Central Commercial Oil Co. No. 3 Hay, SW NW SW section 10-17-10, an old well being deepened, topped Arbuckle lime at 3,101 feet and drilling at 3,508 feet in Arbuckle; Shaw, Doak & Hughes No. 1 Yarhola, NE cor. section 25-17-7, cellar and pits.

Okmulgee County

Colton & Lester No. 1-B Berryhill, NW NW NE section 17-14-13, Hamilton Switch area, Okmulgee County, had sand at 1,959-78 feet; total depth 1,985 feet; was shot and swabbed 30 bbls. of oil daily.

W. B. Pine No. 6 Sells, NE NW NW section 10-15-14, had a hole full of water in sand at 1,636-72 feet, total depth, and was abandoned.

Eagle Picher Lead & Zinc Co. No. 2-A Bullett, SE SW NE section 27-12-12, an old well, was deepened from 2,043 feet to 2,403 feet, produced 3,000,000 feet of gas and was recompleted.

Okmulgee County first reports: Heinrichs No. 1-A McKinney, C E half NW SE section 3-14-14, spudded; W. W. Granfield No. 1-A Anderson, NE NE SE section 8-14-15, location; R. E. Downing No. 6 Colbert, NE cor. section 1-15-14, location; Misener No. 21 Larney, C S half NE NE section 28-15-14, drilling at 1,525 feet.

Muskogee County

Metzgar & Fultz No. 1 Swan, C E half NE SE section 7-14-19, Jolly-Patton pool, Muskogee County, was dry and abandoned at 860 feet, total depth.

Coal County

Continental Oil Co. No. 1 King A, SW NW SE NE section 26-1n-8, Coal County, was moving in machine.

Marshall County

Levelle Coal Co. No. 1 Pershica, C NE SW section 26-7s-5, Marshall County, was dry and abandoned at 415 feet, total depth.

Carter County

Schermerhorn Oil Co. No. 37 fee, SE SW NW section 5-4s-3w, Healdton field, Carter County, was completed as a 121-bbl. pumper in sand at 1,090-1,106 feet, total depth. Rockland Oil Co. No. 55 Sarasota, NW SE NE section 23-4s-3w, pumped 7½ bbls. of oil in 24 hours and was completed at 1,275 feet, total depth.

New work in Carter County: Carl Carter No. 1-A Gray, SE NE NE section 10-1s-3w, rigging up tools;

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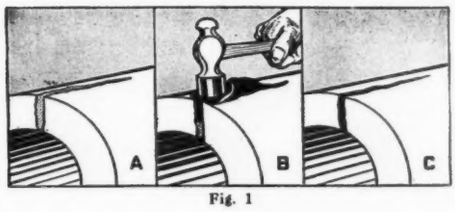

Fig. 1

away should be brought back and tamped further, as continued tamping works the cement into the finest crack.

REINFORCED REPAIRS:—If pressure, warping, vibration or expansion from heat are apt to strain the repair, it should be reinforced. Plain metal straps (Fig. 2) fastened across the crack with screws, or around the casing with straps will give the necessary protection. A surface pocket and clamp for forcing additional Smooth-On against the crack are desirable under

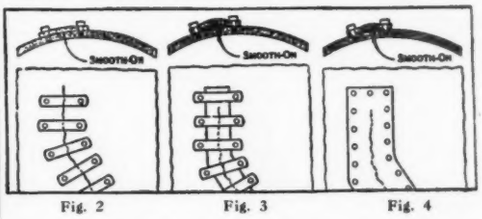

Fig. 2 Fig. 3 Fig. 4

severe conditions, and obtainable by putting a metal patch plate under the straps (Fig. 3) or by utilizing a patch plate held at the edges by screws (Fig. 4).

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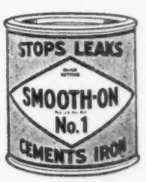

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Carter Oil Co. No. 41 Ward, C S half NE NW section 6-4s-3w, spudded; Sinclair Prairie Oil Co. No. 6 Lowman, SW SW SE section 9-4s-3w, cleaning out at 1,152 feet, total depth.

Kay County

Shell Petroleum Corp. and Continental Oil Co. No. 5 Lawrence, SE SE NW section 5-28-1w, Braman area, Kay County, was a location.

Southwestern Oklahoma

Three wells were completed in Stephens County. Raizen Brothers No. 14 Price, SE SE SW section 10-3s-5w, Loco area, was a 20-bbl. pumper in sand at 1,439-59 feet, total depth. George L. Pace and others No. 5 Duncan, SW NW NE section 28-2s-7w, produced 4,000,000 feet of gas and was completed at 1,288 feet, total depth. William Angle and others No. 1 Posey, C NW NW section 8-1n-8w, wildcat, was dry and abandoned at 5,504 feet, total depth, in shale.

Two new tests in Stephens County were started. George L. Pace No. 6 Duncan, SW NW NE section 28-2s-7w, was drilling at 549 feet. Mudge Oil Co. No. 48 Woods, NW NE SW NW section 26-1s-5w, was drilling at 305 feet.

In Grady County, T. H. McCasland No. 2 White Eagle, NW NE NW SW section 27-3n-5w, a new test, had dug pits.

In Caddo County, English Drilling Co. was building derrick to deepen No. 5 Abernathy, C SE SE section 31-6-9w, an old well.

A failure was recorded in Kiowa County at Debolt No. 1 Burnett, NW SE NE section 30-7-20w. It was dry and abandoned at 960 feet, total depth.

Gulf Oil Corp. No. 4 Ely, NW NE SE section 10-1n-20w, Altus area, Jackson County, produced 200,000 feet of gas and was completed after plugging back from 1,767 feet, total depth, to 1,435 feet.

In Comanche County, C. V. Morris No. 1 Young, SE NE SE section 24-3n-10w, wildcat, was dry and abandoned at 1,008 feet, total depth. Ashcraft & Palmer No. 1 Polk, NW NW SW SW section 28-2n-10w, was bottomed at 1,045 feet and operators were preparing to test.

Bridwell Oil Co. No. 12 Wahlgemuth, NW NE NW section 30-6s-5w, Jefferson County, had sand at 1,479-1,521 feet, total depth, and was completed as a 75-bbl. pumper. Farlyn Oil Co. No. 43 Seay, NE NW SW SE section 3-7s-5w, was a location in the Seay area.

Southwest Texas Fields

(Continued from Page 79)

operations. The Gravis discovery, on the other hand, was in the center of open acreage, and the oil strike was followed by a leasing boom, the like of which has not been seen in the Laredo district in a long time. The new field is in the trend of what some geologists consider to be a possible string of deep producing fields to parallel the shallower production of the Mirando-Government Wells area.

In Webb County the second producer in the new Killam field extended the Mirando sand production as O. W. Killam No. 1 Garcia came in for an initial of about 72 bbls. per day. The same operator brought in a mile southwest extension to Cole production in Webb County with No. 50 Bruni last week. The test made 12 bbls. per day from sand cored at 3,409-31 feet.

Bee County operators' attention was focused on L. Glasscock No. 1 Ablinger. The wildcat, 4 miles southeast of Beeville, is bottomed at 5,945 feet. Last week it blew out and was controlled shortly after, showing a pressure of 3,000 pounds and making some distillate with gas. Operators were last reported cutting out stuck drill stem.

Balcones Fault Zone

The Balcones Fault Zone drilling continued very active, with Caldwell and Guadalupe counties sharing the principal development. Results included the completion of Brinkley No. 2 Trammel, a wildcat north of the Luling field, for a shallow producer, and the completion of a number of new wells in the Webster-Branyon area of Caldwell County. Operations in that area are confined to the drilling of tests by independents.

Another section of the Fault zone is coming again into active status with the resumption of drilling by Amerada Petroleum Corp. in the Pearsall field of Frio County. The company, which holds all acreage in the field, is moving back on three old tests. A fourth rig is drilling below 9,335 feet on No. 8 Halff & Oppenheimer and still another is below 6,300 feet on No. 1 Harrigan, a wildcat.

East and East Central Texas

By
L. E. BREDBERG

OPELIKA TRINITY DISCOVERY IS CREATING NEW INTEREST

DALLAS, Tex., May 3.—The northeastern Henderson County Trinity discovery of the Tide Water Associated, Seaboard Oil Corp. and Humble Oil & Refining Co., in the W. P. Wyche Survey, 1½ miles northwest of the crossroads town of Opelika, which showed for a producer from the Glen Rose (Trinity) about 10 days ago, is still incompleted after trying during the week to produce the well through the stuck 4½-inch drill stem with bit on bottom.

The well flowed several hours at the rate of about 60-66 bbls. per day, producing considerable mud, which was part of the 125 tons pumped into the hole to kill the pressure when it threatened to blow out after the pay was struck at 7,185 feet and the hole was carried to 7,195 feet. On the first test the oil tested only 34.5 gravity, but later the gravity increased to 37.5 degrees, the oil being dark brown in color, and the well making considerable gas at first, which later was depleted.

After the well showed it would not clean itself of the large quantity of heavy mud, which may have sealed off part of the pay formation and clogged the hole below the tools which were pulled 35 feet off bottom when the operators tried to pull them out of the hole and they stuck, a small string of drill pipe, 1¾-inch, was moved in through which the well was washed for some time. This proved of no avail in cleaning the hole and starting the well to produce in any better quantity. This same drill pipe will now be used in trying to mill off the bit on the bottom of the 2½-inch drill pipe, which is being used for the flow string as the usual string of casing was not run in the hole, which caused the present trouble.

The well has again created interest in Henderson and adjacent counties, especially from a deep drilling standpoint, and another lease and royalty play is taking place on lands not previously under lease when the well showed from the deep horizon.

After the showing was first made Pure Oil Co. sent several land men into the area northeast of the well, around Chandler, to take a block. Other companies and operators have taken leases and royalties as near to the well as possible, although the three allied companies drilling the test hold some 12,000 acres surrounding the well and no close in acreage was available. W. C. Windsor of Tyler is one of the larger royalty owners, holding some 800 acres of royalty and one 140-acre lease to the west and southwest of the well. McElreath & Suggett of Fort Worth, on whose land the well is located, hold some 500 acres of royalty under the block tested.

Old Kelsey Dome

The old Kelsey dome structure in the western part of Upshur County, about 6 miles west of Gilmer, is considered similar to the Opelika structure, consequently leasing and royalty buying has extended that far from the Henderson County strike, and a deep test can be expected on that structure at a later date, the area having already been tested for Woodbine production and found wanting, as was the Opelika structure.

After a number of deep tests proved failures on some of the best looking structures in the district, interest was rapidly waning in that sector, but this deep strike has revived interest, and independents and companies are again feverishly engaged in buying and filing deeds for leases and royalties, especially at Athens, county seat of Anderson County, which has not seen such a play since the LaRue lease play and testing was carried on several years ago.

Wildcatting

The wildcat test of J. G. Mayo Oil Co. on the J. E. Bailey farm, J. H. Russell Survey, 2½ miles west of Lone Star, in Cherokee County, has been given up as a failure at a total depth of 4,582 feet. At the same time another wildcat was reported drilling in the county. This test, Stoco Oil Co. and others No. 1 E. B. Parks, J. T. Cook Survey, 4 miles southwest of the county seat, Rusk, and in the vicinity of the small Rusk pool, is down nearly 2,900 feet, drilling.

The Joiner-Owens test on the Joe Goss lands, J. Stephens Survey, north of Honey Grove in Fannin County, which has been shut down for some time at 2,700 feet, has been abandoned and the rig moved to another location. The new test will be drilled on the Dr. C. A. Gray farm in the Alexander Russell Survey, 4½ miles west of Monktown, in the northeastern part of the county.

Northeast of the town of Bonham and north of Windom, in Fannin County, J. Q. Stewart and A. L. Chaffin, of the former town, have completed assembling a block of 7,000 acres on which a 4,500-foot test is to be drilled, W. H. Richardson of Tyler having the contract.

Grapeland Area

The gas area a short distance north of Grapeland in northern Houston County, in which American Liberty Oil Co. has two gas producing wells in the Woodbine sand, will get its third test by that company, which is now moving in materials on the W. L. Moody lands, in the S. C. Parker Survey, north of the discovery well.

Talco and Sulphur Bluff

There were 12 locations staked in the Talco field in northwestern Titus and northeastern Franklin County, while an even dozen were completed. Two more wells were also put on production in the Sulphur Bluff field in Hopkins County, one of which made 30 bbls. per hour and the other 519 bbls. in 24 hours through one-quarter inch choke, both flowing. All but two of the Talco producers were pumpers or swabbers when completed, showing the difference in caliber of wells in the two fields.

Last week the Talco field was extended another quarter of a mile east in Titus County when Humble Oil & Refining Co. No. 1 W. E. Wilson, A. J. Fry Survey, made 143 bbls. of oil in 24 hours from the Paluxy topped at 4,214 feet, with total depth of 4,308 feet. The oil tested only 21.8 degrees gravity, or about the average of the field, which is lower than the Sulphur Bluff field, which is around 24.5 degrees.

East Texas Field

Locations in the East Texas field took another jump, reaching a recent high of 57, while at the same time 42 wells were completed. New wells are drilling adjacent to other wells, which is evidence that drilling permits are being granted to exception wells, or wells drilled closer to lease lines than 330 feet or within 660 feet of each other.

The only block not having production in the town of Kilgore will soon have production as the back end of a store has been torn out to accommodate a rig and derrick, and the store itself has been emptied of its merchandise to hold a slush pit and drilling machinery. This will no doubt be the first time that a store building has ever been emptied of its merchandise to accommodate a slush pit. Several other wells are to be drilled in this undrilled block in Kilgore, but with the store buildings abutting against each other it is difficult to see where other rigs can be moved in and derricks erected, although one hotel building was partly cut away to accommodate a derrick and rig in one instance of town lot drilling.

EAST TEXAS COMPLETIONS

Gregg County

Buckley and others No. 1 Adams, 3,527-52 feet, 60 bbls. per hour. Deep Rock and others No. 12 Prichard, 3,495-3,540 feet, 15 bbls. in 20 minutes. Fain-McGaha, Inc., No. 11 Clemens, 3,600-37 feet, 40 bbls. per hour. Humble Oil & Refining Co. No. 45 Hughes, 3,639-3,703 feet, 48 bbls. per hour. Tide Water Associated No. 27 Castleberry, 3,585-91 feet, 30 bbls. day on swab. Flannigan Production Co. No. 9 Walker, 3,580-83 feet, 20 bbls. per hour. Hamilton and others No. 3 Utzman, 3,485-3,510 feet, 20 bbls. per hour on pump; No. 6 Utzman, plugged at 2,450 feet, crooked hole; No. 8 Utzman, 3,515-38 feet, 20 bbls. per hour on pump; No. 9 Utzman, 3,492-3,522 feet, 20 bbls. per hour on pump. T. D. Humphrey No. 2-B Spear, 3,534-63 feet, 30 bbls. in 30 minutes. Sam Jordan No. 1 Gary, 3,634-40 feet, dry and abandoned. Shell Petroleum Corp. No. 39 Elder, 3,543-64 feet, 40 bbls. in 30 minutes; No. 30-A Laird, 3,592-3,602 feet, 32 bbls. in 30 minutes. Sinclair Prairie Oil Co. No. 8 Walker, 3,684-92 feet, 20 bbls. per hour. Sun Oil Co. No. 23 Morton, 3,461-3,500 feet, 55 bbls. per hour. Texas Co. No. 13 Davis, 3,560-68 feet, 30 bbls. in 37 minutes. Tide Water Associated No. 32 Hughey, 3,496-3,535 feet, 10 bbls. in 10 minutes; No. 19 King, 3,582-95 feet, 10 bbls. in 10 minutes. Wheelock & Collins No. 11 Clayton, 3,548-64 feet, 60 bbls. per hour.

Rusk County

Everts Drilling Co. No. 10 Crews, 3,816-17 feet, 37 bbls. per hour. Byars & King No. 4 Flore, 3,647-48 feet, 10 bbls. per hour. Shasta Oil Co. No. 7 Alexander, 3,627-33 feet, 10 bbls. in 15 minutes. Smith and others No. 7 Terrell, 3,674-77 feet, 20 bbls. in four hours on pump. Tide Water Associated No. 16 Christian, 3,700-25 feet, 20 bbls. in 15 minutes. Atlantic Refining Co. No. 41 Kinney, 3,627-97 feet, 45 bbls. per hour. Gant and others No. 15 Hale, 3,550-68 feet, 9 bbls. per hour. Humble Oil & Refining Co. No. 56-A Silvey, 3,592-3,692 feet, 60 bbls. per hour; No. 36 Turner, 3,719-74 feet, 20 bbls. in 30 minutes. Luling Oil & Gas Co. No. 1 Maxwell, 3,613-79 feet, 20 bbls. in four hours on pump. Stanolind Oil & Gas Co. No. 16 Alford, 3,750-55 feet, 61 bbls. per hour; No. 14 Mason, 3,599-3,618 feet, 20 bbls. per hour. G. H. Vaughn No. 10 Thrash, 3,773-84 feet, 54 bbls. per hour. Wynn Drilling Co. No. 1 Knight, 3,615-30 feet, 40 bbls. in 30 minutes.

Smith County

McMurray Oil Co. No. 25 Turner, 3,804-05 feet, 40 bbls. per hour. Weaver-Crim Oil Co. No. 10 Stone, 3,796-3,800 feet, 20 bbls. in 20 minutes.

Upshur County

Baggett and others No. 3 Owens, 3,738-39 feet, 30 bbls. in 45 minutes. General Crude Oil Co. No. 9 Williams, 3,671-72 feet, 20 bbls. per hour. P. H. Pewitt No. 4 Phillips, 3,714-64 feet, 30 bbls. in 30 minutes. Stidham & Thrasher No. 9 O'Byrne, dry and abandoned 3,800 feet. Sun Oil Co. No. 20 Hargraves, 20 bbls. in 50 minutes. J. E. Watts No. 9 O'Byrne, 3,803-19 feet, 40 bbls. per hour.

MISCELLANEOUS COMPLETIONS

Anderson County

F. H. E. Oil Co. No. 2 Moody, 5,376-5,410 feet, dry and abandoned, elevation 308 feet; No. 1 Robinson, 5,495 feet, 79 bbls. in 24 hours through one-eighth inch choke. Tide Water and others No. 2 Tucker Royall, 4,086-92 feet, 104 bbls. in 24 hours through one-eighth inch choke.

Angelina County

W. Sandler No. 1 Collins, 1,460-66 feet, 5 bbls. per week.

Cherokee County

J. G. Mayo No. 1 J. E. Bailey, 4,562-82 feet, dry and abandoned.

Henderson County

E. B. Corley No. 1 C. R. Litchfield, 4,096 feet, 115 bbls. in 24 hours through one-eighth inch choke; Cortex

Petroleum Co. No. 1 B. H. Wathen, 4,100 feet, 132 bbls. in 24 hours through one-eighth inch choke.

Bowie County

Chew-Brassett No. 1 Byron Barkman, dry and abandoned 64 feet.

Franklin County

Humble Oil & Refining Co. No. 2 Stewart, 4,311 feet, 416 bbls. in 24 hours.

Hopkins County

Hager and others No. 3 Worsham, 4,539 feet, 30 bbls. per hour. Shell Petroleum Corp. No. 3 Reynolds, 4,535 feet, 519 bbls. in 24 hours through one-quarter inch choke.

Titus County

Adams & Lyle No. 5 Davis, 4,344 feet, 481 bbls. in 24 hours; No. 10 Davis, 4,255-4,330 feet, 260 bbls. in 12 hours on pump. B. G. Byars No. 3-A Edwards, 4,300 feet, 15 bbls. per hour on swab. Housh & Thompson No. 4 Hargrove, 4,178-4,336 feet, 374 bbls. in 19 hours. Humble Oil & Refining Co. No. 35 King, 4,318 feet, 280 bbls. in 12 hours on pump; No. 36 Hughes & King, 4,297 feet, 32 bbls. per hour. R. E. Moore, trustee, No. 3 Edward, 4,265-4,300 feet, 20 bbls. per hour on swab; No. 1 Moore, 4,165-4,300 feet, 20 bbls. per hour swab; No. 4 Moore, 4,198-4,332 feet, 150 bbls. in 24 hours. Rozzell Oil Co. No. 1 Osborn, 4,350 feet, 90 bbls. in 24 hours. Tide Water Associated No. 5 Carr, 4,335 feet, 11 bbls. per hour on pump.

West Texas Fields

(Continued from Page 96)

Texas Co. No. 434 Waggoner A, 1,962-72 feet, 55 bbls. Waggoner Refining Co. No. 15 Waggoner AA, 1,935-47 feet, 50 bbls.

Young County

S. S. Alexander Oil Corp. No. 8 G. B. Hamilton, 940 feet, dry. J. W. Lane No. 2 Lem Groves, 960-61 feet, 10 bbls. Lupton & McLester No. 1 J. A. Brown, 3,700-30 feet, 500 bbls. Petroleum Production Co. No. 8 Luton and others, 660-65 feet, 10 bbls. Pitzer & West No. 1 J. C. Nolen, 3,796-3,885 feet, 700 bbls. Rathke Oil Co. No. 1 Texland, 3,700-4,200 feet, 20 bbls. E. C. Reed No. 1 Mrs. E. Weems, 585 feet, dry. A. T. Strong No. 1 M. K. Graham, 2,580-90 feet, 150 bbls. Robert E. Sweeney No. 1 L. C. Clark, 670 feet, dry.

PANHANDLE COMPLETIONS

Carson County

Huber Petroleum Co. No. 7-R Burnett, 3,082-3,146 feet, 790 bbls. Sinclair Prairie Oil Co. No. 6 Cooper, 2,965-3,067 feet, shot, 583 bbls. on pump.

Gray County

Cosmos Oil Co. No. 4 Catlin, 3,125-3,230 feet, shot, 818 bbls. on pump. Dolomite Production Co. No. 3 Sailor, 3,120-3,244 feet, 650 bbls. on pump, shot. Empire Oil & Refining Co. No. 1 Stephens, 3,281 feet, plugged back to 3,207 feet, 96 bbls. on pump. Gardner Brothers No. 5 Barrett, 3,205-3,310 feet, shot, 735 bbls. on pump. Magnolia Petroleum Co. No. 7 Barrett, 3,210-80 feet, shot, 64 bbls. on pump. Sinclair Prairie Oil Co. No. 4 Smith, 3,193-3,270 feet, shot, 246 bbls. on pump. Stanolind and others No. 7 Waggoner, 3,138-3,303 feet, shot, 271 bbls. on pump.

Hutchinson County

Phillips Petroleum Co. No. 10 Perkins, 2,934-3,060 feet, shot, 375 bbls. on pump. Tripplehorn Brothers No. 6 Ware, 2,945-3,150 feet, shot, 597 bbls. on pump.

Moore County

Shamrock Oil & Gas Co. No. 2-D Robertson, 3,425-3,530 feet, plugged back to 3,442 feet, shot, 82 bbls.

Kansas Fields

(Continued from Page 82)

32-10, was drilling at 650 feet. Olson Drilling Co. No. 1-A Holroyd, NE NE SW section 24-33-10, had spudded. Robinson and others No. 1 Foster, SW cor. section 6-33-12, wildcat, was rigging up machine.

Elk County

Republic Natural Gas Co. No. 1 Glasscock, SE NE SW section 19-31-11e, was location for a Elk County wildcat east of the Webb area and northeast of the Key pool.

Woodson County

Harper and others No. 1 Miller, NW NE SE section 10-24-14, wildcat in Woodson County, had Mississippi lime at 1,623-73 feet, total depth, and was dry and abandoned.

New work in Woodson County: Ward McGinnis No. 1-A Bolles, SW SE NW section 31-23-14, drilling at 600 feet; B. & B. Oil Co. No. 1 Lockard, NW NW NE section 2-26-13, wildcat, machine; same company's No. 1 Webb, C NE SE section 3-26-13, wildcat, drilling at 300 feet; M. B. Allen No. 1 Flack, NE NE NW section 1-26-14, wildcat, rigging up machine.

Various First Reports

W. I. Southern, Inc. No. 1 Latimer, NW NW SE section 19-15-22w, Trego County wildcat, was rigging up rotary.

Westgate-Greenland Oil Co. and others No. 1 Greenwalt, NW NW NE section 19-19-16w, wildcat in Rush County, was moving in material.

New work in Stafford County: Empire Oil & Refining Co. No. 1 Sifers B, SE NW NW section 10-21-11w, cellar; Stanolind Oil & Gas Co. No. 2 P. Spangenberg, NW NW SW section 29-22-11w, location; same company's No. 2 W. Spangenberg, SW SW NW section 29-22-11w, location; same company's No. 6 Komarek, SE SE NE section 30-22-11w, location; same company's No. 7 Komarek, NE NE SE section 30-22-11w, location; Stanolind Oil & Gas Co. and others No. 3 Brock, SW SW NW section 6-23-11w, location; same operators' No. 6 Brock, NE NE NW section 6-23-11w, location.

Simpson & Noble and others No. 1 Pierce, SW SE NE section 25-22-2w, was location for a Harvey County wildcat.

Gore & Beran and others No. 22 Imthurn, C SW SE section 4-23-13, Greenwood County, was drilling at 190 feet.

Louisiana-Arkansas Fields

(Continued from Page 88)

production. Location is about 7 miles from Carthage, Tex.

Shelby County

The H. A. Stebbinger and others No. 2 Pickering Lumber Co., A. Hanson Survey in northern Shelby County, regarded as a possible field opener at total depth of 5,029 feet after coring attractive saturation above this point, is now shut down awaiting delivery of casing to location. Pipe is expected within the next week, and a test will be possible soon thereafter.

MISSISSIPPI

Amite County

J. P. Wemple No. 1 Southern Forest Land Co., section 29-4n-2e, wildcat test of the extensive block here, has reached contract depth of about 5,200 feet. Schlumberger survey of hole was made, and operations have been shut down awaiting orders.

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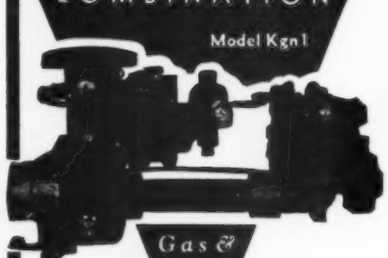

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Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, May 3.—The completion of two more tests in the new Huron County gas field, in northern Ohio, is attracting attention of operators because they not only extend the present boundaries of the field but because one test is making 1 bbl. of oil a day along with the gas.

A. C. Leathers & Co. drilled both tests. The first drilled on the J. Bellamy farm, in section 4, Hartland Township, was completed below the Lime at 734-800 feet and made 1 bbl. of oil and 200,000 feet of gas after a shot. The other, drilled on the Edwin Burr lease in section 3, same township, made 121,000 feet of gas in the same formation at approximately the same depth.

The discovery well was drilled by A. C. Leathers and his associate, C. L. Williams, after several weeks of exploration with magnetic and geophysical methods which located a structure that showed possibilities of oil and gas production. This well was drilled on the Anna Summerlin farm, about 3 miles north of Olena, and found gas in three different formations and had an initial gauge of 3,000,000 feet from 644 feet. Six other tests drilled by these operators have proved a large area in this county and have made from 50,000 to 6,000,000 feet of gas a few minutes after shot, later blowing down to about half of the flush gauge. Wells drilled in this field to date have found gas in the Devonian shales through a thickness of from 300 to 450 feet and in the top Niagara lime at from 720 feet to 850 feet. Gas found in the shale, however, blows down to practically nothing a few hours after completion.

Gas found in the top Niagara lime, however, maintains its volume much longer and then blows down to about half of the initial gauge. When the gas blows down in this formation it is not uncommon for oil to come in and this seems to indicate oil in commercial quantities will be found on the flanks of this large uplift. Local operators and some larger companies have thousands of acres under lease and many locations have been staked for wells to be drilled when weather conditions improve. A. C. Leathers & Co. have rigged up for three tests and have let contracts for 25 more to be started within a few weeks. These operators expect to have approximately 50 wells completed in this field within a few months.

Wells completed in this new field to date have been shut in temporarily awaiting completion of negotiations for a pipe line to carry the gas to a market. The present scene of operation is approximately 8 miles from large trunk lines of major companies and the reported price of gas in this district is 18 cents per 1,000 feet at the wells.

A. C. Leathers & Co. are spudding in No. 1 on the Fred Jarrett farm in section 4, Hartland Township, and starting to drill in two tests in an effort to extend the present boundaries of this field. One is being drilled on the Charles Blatt, Jr., property, in section 6, and the other is on the E. M. Burras lease in section 8.

LIMA FIELD

In Sandusky County, section 25, Washington Township, George and John Willard No. 12 Calvin Fought made 2 bbls. the first 24 hours after a shot. In section 31, Rice Township, W. G. Montgomery & Co. are drilling No. 2, on the Noah Hetrick property. Bradford Supply Co. has abandoned 29 of the old producers in this county which they recently purchased from Security Oil Corp.

In Auglaize County, SW quarter section 3, Logan Township, Buckland Oil Corp. is rigged up for No. 5, on the S. V. Scott property.

Davis & Jones are rigged up for No. 4 Charles Post, section 9, Amanda Township, Allen County.

INDIANA FIELD

In Decatur County, section 11-9n-9e, Marion Township, Hoosier Public Utility Corp. completed No. 197, the second test on the Constant Abeele property, as a commercial gas well.

ILLINOIS FIELD

Activity in the Illinois field is steadily increasing and a great many individuals and smaller companies from other fields are entering this section.

In St. Clair County, section 36-3s-6w, Marissa Township, W. A. Halt has completed the test on the R. A. Moffat lease as a commercial gas well at a total depth of 800 feet in the Lower Chester, of the Upper Mississippian. In section 18-1s-7w, Freeburg Township, A. J. Colgan & Co. are drilling below 700 feet on the W. J. Reickert lease.

In Clark County, section 4-11n-14w, Parker Township, E. Parker & Co. have abandoned the test on the M. E. Endsley farm. It was drilled to 520 feet and was completed in the Salem formation of the Lower Mississippian. In section 11-9n-14w, Johnson Township, Joseph Hassett & Co. is rigged up on the William Davidson property. In section 21-11n-12w, Marshall Township, National Consumers Oil Co. has resumed operations on the Minnie Jackson lease and is drilling below 1,260 feet. Joseph Hassett No. 31, on the J. A. Turner lease in section 33, Parker Township, has been shut down at 460 feet.

In Wabash County, NE NE section 7-1n-11w, Wabash Township, Mahutska Oil Co. No. 11 Mark Madden was drilled to a total depth of 1,434 feet, and has an estimated production of 75 bbls. after a shot of 60 quarts. It was completed in the Biehl sandstone, a basal Pennsylvanian, topped at 1,407 feet.

William and Dave Goodwin No. 4 E. G. Walters, section 7-7n-13w, Oblong Township, Crawford County, topped the Robinson sandstone (basal Pennsylvanian) at 995 feet and was drilled to 1,004 feet without a show of oil or gas.

OHIO FIELD

Field operations in the Ohio field were slowed up considerably by heavy rains and comparatively few locations were staked. In Morgan County, location 1,139, Windsor Township, Turney & Co. have completed No. 8 Narcissa Hardin as a 2-bbl. producer. It was drilled through the Peeker sand at 422-46 feet to 551 feet and was shot with 100 quarts.

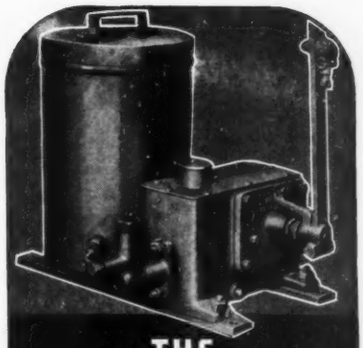
In Stark County, section 21, Plain Township, H. W. Hoover, completed No. 3, on his own property, as a commercial gas well, below the Clinton sand at 4,606-26 feet, gauging 1,152,000 feet after a shot.

Ohio Fuel Gas Co. No. 1 John Shopoff, section 11, Avon Township, Lorain County, was completed below the Clinton sand at 2,295-2,305 feet as a commercial gas well. In section 28, same township, Ohio Fuel Gas Co. is rigged up on the A. Forthover property.

In Knox County, section 21, Jackson Township, Johnson & Co. No. 3 Charles Davidson was drilled to a total depth of 2,932 feet and has been abandoned. In section 22, Union Township, Upham Gas Co. drilled on the Lewis Crise farm through the Clinton sand at 3,052-66 feet where it gauged 1,332,000 feet naturally. In section 18, Jefferson Township, Upham Gas Co. completed the test on the Jasper Colop, Jr., lease as a commercial gas well. It was completed below the second Clinton at 3,053-72 feet and gauged 942,000 feet of gas naturally.

Wittmer Oil & Gas Co. No. 1 Thomas Scott, section 3, Washington Township, Muskingum County, was completed below the second Clinton sand at 3,697-3,718 feet and gauged at the rate of 521,000 feet of gas 10 minutes after a shot. The volume had blown down to 55,000 feet 18 hours later, and the well may be plugged. In section 2, Falls Township, Ohio Fuel Gas Co. No. 1 Edward Tanner made a very good show of gas in the top Clinton at 3,296-3,314 feet and is drilling through the second Clinton, topped at 3,322 feet. In Licking Township, section 3, Hope Construction & Refining Co. is rigged up for No. 8 Joseph Varner.

Stout & Shafer No. 4 Chris Keevert, in section 5, Adams Township, Monroe County, was completed below the Berea sand at 2,216-26 feet and has 40,000 feet of gas after a shot of 40 quarts. In section 4, Center Township, F. S. Paulus & Co. have completed the test on the Barney Bott farm, as a commercial gas well. It was drilled through the Lime at 1,441 feet and gauged 962,880 feet naturally.



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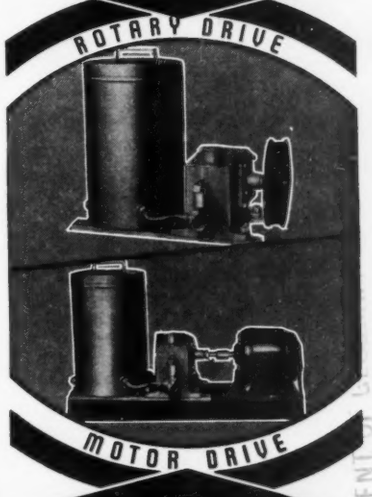

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Michigan Field Report

By
PAUL A. ELLIOTT

BUCKEYE PRODUCING AREAS MAY BE CONNECTED BY TEST

MUSKEGON, Mich., May 3.—Mud and heavy spring rains delayed completion of a score or more of important tests in Michigan, several of them possible extensioners and one considered the key that may open a large unexplored extent between the two flourishing sectors of the new Buckeye Township, Gladwin County, pool, most interesting in the state. Despite this condition, 14 tests were finished, seven for 2,745 bbls. aggregate Dundee crude initial and seven as dry holes, all but one also in the Dundee limestone. Three additional Dundee crude producers were increased in daily output by 1,662 bbls., giving the state 4,407 bbls. of new crude daily.

Characteristic of recent weeks, the Buckeye-Gladwin field outstripped all others, adding 2,315 bbls. of initial in three Dundee tests and 1,662 bbls. by treatment. Two Ogemaw County wells made 300 bbls., one in Porter, Midland, 90 bbls., and one in Clayton, Arenac, 40 bbls. initial.

Dry holes were completed in Sherman, Vernon and Wise Townships, all in Isabella County; Geneva Township, Midland County; Dundee Township, Monroe County Belvidere Township, Montcalm County, and Olive Township, Ottawa County.

Buckeye—Gladwin

In the Buckeye Township, Gladwin County area, operators awaited completion of Hanners Development Co. No. 1 Armstrong, NE NE SW section 23-18n1w, which had been cased and was ready to puncture the Dundee about midway between the two producing arms of the field.

Likewise, operators watched with interest drilling of Cryden Petroleum Co. No. 1 Gary, NW NE NE section 34-19n-1w ,Gladwin Township and County, as a possible 2½ miles west and north extension of the more prolific northeast section. Topping Dundee at 3,659, it had been drilled about 75 feet into the limestone on last report. It is about a mile west and 1½ miles north of production.

Larger Completions

The largest new producer in the state and in the Buckeye-Gladwin field last week was Sun Oil Co. No. 4 Salla, SW NW SW section 11-18n-1w, which produced 1,465 bbls. naturally when completed at 3,620 feet, having topped Dundee lime at 3,535 feet. It was the largest natural of four producers now completed on the lease in the northeast sector. No. 3 Salla, NE SW SW same section, was boosted from 75 to 235 bbls. daily by acidizing.

Mammoth Producing & Refining Corp. added 500 bbls. naturally, with a possibility of more after treatment, when No. 1-D State, NW SE NE section 14, northeast Buckeye, was drilled into the Dundee, topped at 3,545 feet and into the oil pay sands at 3,618 feet. It started flowing 45 to 50 bbls. an hour but quickly settled to 500 bbls. a day.

Gordon Oil Co. picked up 1,852 bbls. of initial in the three wells in the southeast Buckeye sector, one a new completion and the other two by acidizing, all on the same lease. No. 4-A Havens made 350 bbls. naturally at 3,606 feet after topping the Dundee lime at 3,484 feet. No. 3-A added 800 bbls. by increasing from 350 to 1,150 bbls. daily after acid, while No. 2-A was boosted from 400 to 1,102 bbls.

Four other Buckeye tests recorded Dundee shows, all expected to result in commercial production, two in the northeast or Wicklund sector, and two in the southeast, or Oard section.

Mammoth No. 1-C State, NE SE SE section 10, Buckeye, struck a show at 3,606 feet, or 65 feet in the Dundee, and was held up by a fishing job, while the company's No. 2-B State, NW SE SE section 11, also struck Dundee pay.

Fortney Oil Co. had 1,200 feet of oil in the hole in No. 1 Adams-Phillips, SW SE NW section 25, which topped the Dundee at 3,501 feet and a show at 3,585 feet before preparing to treat with acid 99 feet in. C. L. Maguire, Inc., also was ready to treat a show of 400 bbls. in the hole in No. 1 Fritzwater, SE SE NE section 26, in which the Dundee was topped at 3,499 feet.

Gordon Oil Co. was plugging and abandoning No. 1 McClure, NE NW NE section 25-19n-2w, Sage Township extension wildcat, which topped Dundee at 3,863 feet but was in bottom water at 3,934 feet, about 5 miles northwest of Buckeye production.

Bell & Marks struck a show in No. 1 Wineman, NW SW NW section 9-17n-1e, a Billings Township wildcat a mile southeast of production, but were not yet certain of success in the Dundee.

Buckeye continued to lead in drilling operations, locations and every other activity as approximately 100 tests were under way and new ones starting at the rate of 10 to 25 a week, though muddy field conditions delayed moving of rigs last week.

Ogemaw County

In Ogemaw County two West Branch Township wells added 300 bbls. initial from a single lease. Weber Oil Co. finished No. 3 W. S. Crawford, NE NE SE section 28-22n-2e, West Branch, for about 200 bbls. daily from the Traverse limestone topped at 1,747 feet and drilled into the pay at 1,759 feet, while No. 4 Crawford, NE SE SE, same section and lease, made 100 bbls. daily at 2,707 feet, after topping the Dundee lime at 2,538 feet. Both were acidized. Same company was completing No. 2 Quilici, NE SE SW section 36, same township, with a show in the Dundee being acidized. M. J. Ingold No. 3 Zettle, NW SW SW section 13-22n-1e, Ogemaw Township, had a show at 2,762 feet after topping Dundee at 2,750 feet. It was expected to complete this week.

Midland County

Rex Oil & Gas Co., after months of drilling difficulty, completed No. 5 Howland, SW SE NW section 23-13n-1w, an edge well in the Porter Township field, for 90 bbls. in the Dundee, topped at 3,377 feet and drilled to 3,428 feet where 200 feet of oil in the hole was transformed into a small commercial well with 750 gallons of acid.

The only other Midland completion was Brehm-Hollman Oil Co. No. 2 Gould, SW SW NE section 19-15n-2w, Geneva Township, dry at 3,664 feet after testing the Dundee in an area where several small Dundee and Traverse wells previously had been completed. It had a show of oil and gas in the Traverse at 3,079 feet, but was to be plugged and abandoned.

Arenac County

Gordon Oil Co. completed the only producer in the Clayton Township, Arenac County field, No. 2 Crandall, NW NE SE section 10-20n-4e, which made 40 bbls. naturally at 2,610 feet after topping the Dundee at 2,437 feet. It was being placed on the pump for a test before treating with 1,000 gallons of acid.

Weber Oil Co. already had a show in the Dundee in No. 2 Whiting, SE SE NE section 10, same township, at 2,458 feet after topping the lime at 2,439 feet.

Isabella County

A disappointing record of three "dusters," one in each of Sherman, Vernon and Wise townships, Isabella County, was only partially offset by prospects of success in a Denver Township, Isabella County, test treating both Traverse and Dundee shows last week.

The one possible success was Morris Oil & Gas Co. No. 1 Dimon, SE SW SW section 34-15n-3w, Denver, ready to treat a 5-bbl. show in Traverse and 5 feet in the Dundee at 3,553 feet.

Ward J. Blunt was abandoning No. 1 Mitchell, Trustee, SE SE SE section 29-15n-6w, Sherman Township, dry at 3,751 feet after passing up a flow of about 2,000,000 feet of gas in the Michigan Stray sands some weeks ago.

J. W. McIntosh No. 2 Thayer was scheduled for abandonment in Vernon Township, Isabella County, SW SE NW section 23-16n-4w. It topped the Dundee at 3,545 feet but was dry at 3,557 feet.

Socony-Vacuum Oil Co., Inc. met with disappointment in No. 1 Murphy, C E half SE NE section 6-16n-3w, Wise Township wildcat about 2 miles east of Clare. Bottom water was struck at 3,882 feet after topping the Dundee at 3,735 feet, but operators may plug back to a fair show of gas encountered in the Michigan Stray sands on the way down.

Gas Tests

In marked contrast with a year ago, when scores of tests were drilling and many large gassers being completed in the Tri-Townships field of Mecosta and Montcalm counties, Midland Petrol & Gas Co. last week struck only 50,000 feet of gas in the Michigan Stray sands in No. 1 Houghton, C NW SE section 12-12n-7w, Belvidere Township, Montcalm County gas test, and was prepared to abandon it. Water was encountered at 1,286 feet.

Two gas tests in the New Haven Township, Gratiot County, field were about to drill into the Stray sands, while a test in Ravenna Township, Muskegon County, was held up by muddy field conditions.

Wildcats

Ponchartrain Petroleum Corp. reported a Trenton limestone show expected to make commercial production in No. 1 Boynton, NW SE NE section 27-4s-8e, Sumpter Township, Wayne County, about 70 miles southwest of Detroit. It was being shot.

Two other wildcats were dry, Wandle Oil & Gas Co. No. 1 Hugo Gaertner, SW SW SE section 19-6s-6e, Dundee Township, Monroe County, and Muskegon Oil Corp. No. 1 Wolting and others, SE SE NE section 35-6n-15w, Olive Township, Ottawa County, a Dundee and Traverse failure about 20 miles south of Muskegon.

Kentucky Fields

(Continued from Page 84)

In Johnson County, Mullens & West were drilling No. 6 Mullens in the Keaton Fork district. Ashland Oil & Refining Co. and Cumberland Petroleum Co. were starting the second of three pressure wells for a joint repressuring operation on the Joe Wheeler and Skaggs leases in the Keaton Fork area.

In Elliott County, Ballard Lyons and others were drilling No. 2 J. M. Ison near Isonville. It is a Weir sand test. No. 1 was dry and abandoned.

Three pipe line companies gather oil in Eastern Kentucky fields. Ashland Oil & Transportation Co. runs oil from Elliott, Estill, Floyd, Johnson, Knott, Lawrence, Lee, Magoffin, Martin, Morgan, Owsley, Powell and Wolfe counties; Petroleum Purchasing Co. runs oil in Estill, Lee, Powell and Wolfe counties, and the Texas Co. from Estill, Lee and Powell counties. The latest official statement of runs, that for February, showed the Ashland Oil & Transportation Co. with 106,717.60 bbls., a daily average of 3,811 bbls.; Petroleum Purchasing Co., 19,943.40 bbls., a daily average of 712 bbls., and the Texas Co., 16,153.01 bbls., a daily average of 573 bbls.

Total runs for the whole state were 400,898.54 bbls., a daily average of 14,317.40 bbls., valued at $565,488.28, an average of $1.41 per barrel. There is a 2 per cent state production tax in Kentucky and additional 1 per cent county tax. Fifteen of the 41 oil counties in the state yielded no production in February. These were Bath, Boyd, Breckenridge, Clinton, Cumberland, Hopkins, Hardin, Jackson, Lincoln, Logan, Manifee, Monroe, Morgan, Russell and Whiteley.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location:	S.T.R.	Depth	Status
Shell Oil Co., No. 1-21 Capitan, Santa Barbara Co.	32- 5-30	2,415	sd. sh. drlg.
Hancock-Bush, No. 1-B Santa Maria, Santa Barbara	26-10-34	2,375	sd. sh. drlg.
Union Oil Co., No. 2-V Santa Maria, Santa Barbara	30-10-33	3,516	pump 125 b.d.
Union Oil Co., No. 3-V Santa Maria, Santa Barbara	30-10-33	1,261	sd. sh. drlg.
Union Oil Co., No. 3-23-E Santa Maria, Santa Barbara	23-10-34	1,895	sd. sh. drlg.
Union Oil Co., No. 1-O Santa Maria, Santa Barbara	21-10-34	4,147	sd. sh. drlg.
Union Oil Co., No. 18 Orcutt, Santa Barbara Co.	26- 9-34	3,390	sd. sh. drlg.
Rice Ranch Oil Co., No. 4 Orcutt, Santa Barbara	23- 9-34	3,540	sd. sh. drlg.
Valley Oil Co., No. 1 Casmalia, Santa Barbara Co.	20- 9-34	1,921	reaming
Moyle, B. A., No. 1 Gato Ridge, Santa Barbara Co.	4- 8-32	2,625	br. sh. drlg.
Barnsdall Oil Co., No. 8 Gato Ridge, Santa Barbara	9- 8-32	2,625	sd. sh. drlg.
Stewart-Carter Oil, No. 1 Gato Ridge, Santa Barbara	4- 8-32	2,398	br. sh. drlg.
Fisher, Dan, No. 1 Cuyama, Santa Barbara Co.	28-11-28	646	sd. sh. drlg.
Calumet Oil Co., No. 16 Shiells, Ventura Co.	3- 3-19	4,466	P.B. 3,310
Petroleum Securities, No. 5 Shiells, Ventura Co.	3- 3-19	1,891	sd. sh. drlg.
Texas Co., No. 132 Shiells, Ventura Co.	4- 3-19	3,163	deepening
Union Oil Co., No. 16 Bardsdale, Ventura Co.	12- 3-20	1,540	sd. sh. drlg.
Condor Oil Co., No. 1 Sespe, Ventura Co.	6- 4-19	1,791	br. sh. drlg.
Ivers, H. A., No. 14 Star, Sespe, Ventura Co.	1- 4-20	597	sd. sh. drlg.
Merchants Pet. Co., No. 7 Sespe, Ventura Co.	1- 4-20	1,010	O.S. drlg.
Speik Oil Co., No. 2 Sespe, Ventura Co.	33- 5-19	2,285	hd. sh. drlg.
Colima Oil Co., No. 2 Sespe, Ventura Co.	25- 5-19	2,290	fishing
Bolsa Chica Oil Co., No. 1-H Temescal, Ventura Co.	5- 4-18	2,900	br. sh. drlg.
Pacific Western Oil Co., No. 8 Temescal, Ventura Co.	4- 4-18	1,275	sd. sh. drlg.
Pacific Western Oil Co., No. 10 Temescal, Ventura Co.	3- 4-18	2,900	pump 195 b.d.
St. Louis Oil Co., No. 3 Ojai, Ventura Co.	13- 4-24	1,235	O.S. drlg.
Val. Giovani, No. 1 Ojai, Ventura Co.	4- 4-21	275	sd. sh. drlg.
Continental Oil Co., No. 1 Red Mountain, Ventura Co.	7- 3-23	6,486	hd. sh. drlg.
C. C. M. Oil Co., No. 2 Padre Canyon, Ventura Co.	23- 3-24	6,465	redrlg. 3,452
C. C. M. Oil Co., No. 5-A Padre Canyon, Ventura Co.	15- 3-24	5,227	sd. sh. drlg.
Continental Oil Co., No. 3 Padre Canyon, Ventura Co.	15- 3-24	4,584	hd. sh. drlg.
Tide Water A. O. Co., No. 29 Lloyd, Ventura, Ventura	27- 3-23	5,976	hd. sh. drlg.
Tide Water A. O. Co., No. 60 Lloyd, Ventura, Ventura	27- 3-23	4,991	sd. sh. drlg.
Tide Water A. O. Co., No. 64 Lloyd, Ventura, Ventura	27- 3-23	5,929	sd. sh. drlg.
Tide Water A. O. Co., No. 66 Lloyd, Ventura, Ventura	27- 3-23	4,995	cleaning out
Tide Water A. O. Co., No. 81 Lloyd, Ventura, Ventura	27- 3-23	7,600	to deepen
Tide Water A. O. Co., No. 137 Lloyd, Ventura, Ventura	27- 3-23	6,000	sd. sh. drlg.
General Pet. Corp., No. 17 Barnard, Ventura, Ventura	23- 3-23	7,030	redrlg. 6,842
Continental Oil Co., No. 7 San Miguelito, Ventura Co.	23- 3-24	3,196	sd. sh. drlg.
C. C. M. Oil Co., No. 13-B Rincon, Ventura Co.	8- 3-24	4,400	flow. 1,472 b.d.
Den Petroleum Co., No. 1 Devils Den, Kern Co.	20-25-19	4,086	br. sh. drlg.
Goodrum, George, No. 1 Devils Den, Kern Co.	24-25-18	246	sd. sh. drlg.
Tide Water A. O. Co., No. 5-M-3 Lost Hills, Kern Co.	2-26-20	1,377	bailing
Santa Ynez Oil Co., No. 1 Temblor, Kern Co.	36-29-20	135	sd. sh. drlg.
Welport Oil Co., No. 18 McKittrick, Kern Co.	26-29-21	1,225	P.B. 1,175
Continental Oil Co., No. 1 Wasco, Kern Co.	8-27-24	9,591	prod. test
Seaboard Oil Corp., No. 1 Wasco, Kern Co.	26-27-24	7,105	sd. sh. drlg.
Belridge Oil Co., No. 3-35 North Belridge, Kern Co.	35-27-20	4,973	sd. sh. drlg.
Belridge Oil Co., No. 24-35 North Belridge, Kern Co.	35-27-20	6,795	br. sh. drlg.
Belridge Oil Co., No. 62-27 North Belridge, Kern Co.	27-27-20	8,185	O.S. drlg.
Belridge Oil Co., No. 21-1 North Belridge, Kern Co.	1-28-20	7,893	br. sh. drlg.
Tide Water Associated, No. 6 North Belridge, Kern	34-27-20	3,571	br. sh. drlg.
Texas Co., No. 1 Martin, North Belridge, Kern Co.	22-27-20	5,048	will deepen
Doyle Pet. Co., No. 2 Quinn, Jasmine, Kern Co.	15-25-27	2,876	sd. sh. drlg.
Honolulu Oil Corp., No. 87 Round Mountain, Kern Co.	18-28-29	1,871	O.S. drlg.
Eastmont Oil Co., No. 1 Round Mountain, Kern Co.	16-28-29	1,916	sd. sh. drlg.
Pageman & Hennes, No. 1 Round Mountain, Kern Co.	10-28-29	1,520	sd. sh. drlg.
Shell Oil Co., No. 13 Freeman, Round Mountain, Kern	20-28-29	1,840	sd. sh. drlg.
Shell Oil Co., No. 1-10 Olcese Round Mountain, Kern	17-28-29	1,155	sd. sh. drlg.
Republic Pet. Co., No. 12-S, Kern Front, Kern Co.	24-28-27	2,026	pump. 180 b.d.
Republic Pet. Co., No. 15-S, Kern Front, Kern Co.	24-28-27	191	sd. sh. drlg.
Tide Water Associated, No. 7 Kern Front, Kern Co.	4-28-27	2,290	sd. sh. drlg.
Tide Water Associated, No. 52 Kern Front, Kern Co.	23-28-27	2,185	pump. 50 b.d.
Kern River Oilfields, No. 25-2-B Kern Front, Kern	25-28-27	1,840	O.S. drlg.
Oil, Inc., No. 7-2 Kern Front, Kern Co.	13-28-27	1,230	O.S. drlg.
Barnhart & Morrow, No. 3 K.C.L., Kern Front, Kern	11-28-27	1,190	sd. sh. drlg.
California Star Oil Co., No. 7-80 Kern Front, Kern Co.	22-28-27	2,654	cmtd. 2,370
H. C. L. Co., No. 1 Kern Front, Kern Co.	36-28-27	1,597	sd. sh. drlg.
Milburn, E. B., No. 2 Kern Front, Kern Co.	10-28-27	2,177	P.B. 2,125
National Oil Co., No. 12 Gates, Kern Front, Kern Co.	2-28-29	1,575	sd. sh. drlg.
Superior Oil Co., No. 1 Bakersfield, Kern Co.	36-29-28	5,234	dry; abd.
Sunset Oil Co., No. 1 Union Avenue, Kern Co.	17-30-28	2,793	sd. sh. drlg.
Allied Pet. Co., No. 21 Premier, Kern Co.	29-27-27	2,530	sd. sh. drlg.
Ekoh Oil Co., No. 2 Vedder, Mount Poso, Kern Co.	28-26-28	1,528	rig. to pump
Chevalier, J. J., No. 3 S.P., Mount Poso, Kern Co.	3-27-28	1,475	rig. to pump
Recovery Oil Co., No. 2 S.P., Mount Poso, Kern Co.	33-26-28	1,409	sd. sh. drlg.
Hub Oil Co., No. 1 Mount Poso, Kern Co.	8-28-28	1,560	sd. sh. drlg.
Shell Oil Co., No. 31 Vedder, Mount Poso, Kern Co.	9-27-28	1,800	O.S. drlg.
Western Gulf Oil Co., No. 2-W Fruitvale, Kern Co.	21-29-27	3,952	P.B. 3,930
Western Gulf Oil Co., No. 25-B Fruitvale, Kern Co.	21-29-27	3,920	flow. 310 b.d.
Sandy Oil Co., No. 2 Fruitvale, Kern Co.	26-29-27	1,950	sd. sh. drlg.
Trico Oil & Gas Co., No. 3 Fruitvale, Kern Co.	23-29-27	3,191	pump. 190 b.d.
Pal-Pen Oil Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,165	pump. 140 b.d.
Banducci, L. J., No. 2-T Fruitvale, Kern Co.	26-29-27	3,392	idle
Crude Oil Prod. Co., No. 1 Fruitvale, Kern Co.	21-29-27	3,950	sd. sh. drlg.
Meridian Oil Co., No. 3-T Fruitvale, Kern Co.	23-29-27	1,751	sd. sh. drlg.
American Expl. Co., No. 1-G Mountain View, Kern Co.	18-30-29	4,596	sd. sh. drlg.
Wood-Callahan Oil Co., No. 3 Mountain View, Kern	25-30-28	5,870	pump. 75 b.d.
Hogan Pet. Co., No. 4 Symons, Mountain View, Kern	5-31-29	6,188	cleaning out
Liko Pet. Co., No. 1 Mountain View, Kern Co.	19-30-29	5,359	pump. 281 b.d.
Greer, P. H., No. 2 Perrel, Mountain View, Kern Co.	9-31-29	1,594	sd. sh. drlg.
General Pet. Corp., No. 1-F Mountain View, Kern Co.	19-30-29	4,800	O.S. drlg.
Mohawk Pet. Co., No. 9-C Mountain View, Kern Co.	30-30-29	5,735	pump. 145 b.d.
Mohawk Pet. Co., No. 4 Earl, Mountain View, Kern	4-31-29	2,520	sd. sh. drlg.
Allied Pet. Co., No. 20 Mountain View, Kern Co.	19-30-29	5,457	pump. 50 b.d.
Monterey Expl. Co., No. 6 Duff, Edison, Kern Co.	15-30-28	1,965	O.S. drlg.
East Edison Oil Co., No. 2 Edison, Kern Co.	23-30-30	1,150	idle
Metro Oil Co., No. 1 Edison, Kern Co.	6-30-29	2,701	P.B. 2,615
Johnson-Leaf Oil Co., No. 1 Edison, Kern Co.	24-30-29	1,480	pump. water
Arkelo Oil Co., No. 1 Lerdo, Kern Co.	23-28-26	10,050	fish. D.P.
Union Oil Co., No. 1-34 Rio Bravo, Kern Co.	34-28-25	6,490	sd. sh. drlg.
Continental Oil Co., No. 1 Rosedale, Kern Co.	12-29-26	7,011	gr. sd. drlg.
Standard Oil Co., No. 11-2 Greeley, Kern Co.	20-29-26	8,339	P.B. 7,972
Standard Oil Co., No. 11-3 Greeley, Kern Co.	20-29-26	7,868	deepening
Standard Oil Co., No. 11-5 Greeley, Kern Co.	20-29-26	3,582	sd. sh. drlg.
Standard Oil Co., No. 12-1 Greeley, Kern Co.	30-29-26	7,886	sd. sh. drlg.
Standard Oil Co., No. 14-1 Greeley, Kern Co.	4-30-26	8,302	dry; abd.
Mohawk Pet. Co., No. 1 Greeley, Kern Co.	23-29-25	8,252	br. sh. drlg.
Union Oil Co., No. 2 San Emidio, Kern Co.	34-11-22	1,920	dry; abd.
Union Oil Co., No. 3 San Emidio, Kern Co.	28-11-22	25	sd. sh. drlg.
Shell Oil Co., No. 21-14 Old River, Kern Co.	14-30-25	6,773	sd. sh. drlg.
Shell Oil Co., No. 23-30 Ten Section, Kern Co.	30-30-26	8,160	O.S. drlg.
Shell Oil Co., No. 1 Ten Section, Kern Co.	29-30-26	8,240	flow. 3,864 b.d.
Signal Oil & Gas Co., No. 1 Ten Section, Kern Co.	21-30-27	8,495	gr. sd. drlg.
Superior Oil Co., No. 8 Ten Section, Kern Co.	11-30-26	11,335	sd. sh. drlg.
C. C. M. Oil Co., No. 1-W.P. Midway-Sunset, Kern Co.	28-32-23	3,584	P.B. 2,355
C. C. M. Oil Co., No. 34-21 Midway-Sunset, Kern Co.	21-32-23	1,752	sd. sh. drlg.
B-Zone Oil Co., No. 1 Midway-Sunset, Kern Co.	22-32-23	1,591	sd. sh. drlg.
Midcrude Oil Co., No. 2 Midway-Sunset, Kern Co.	22-32-23	1,946	sd. sh. drlg.
R. & W. Oil Co., No. 4 Midway-Sunset, Kern Co.	6-11-23	3,130	rig. to pump
Colby, L. W., No. 1 Midway-Sunset, Kern Co.	12-11-24	901	sd. sh. drlg.
Standard Oil Co., No. 124-33-D Midway-Sunset, Kern	33-32-24	2,950	sd. sh. drlg.
Standard Oil Co., No. 125-33-D Midway-Sunset, Kern	33-32-24	1,970	sd. sh. drlg.
Standard Oil Co. No. 55-33-D Midway-Sunset, Kern	33-32-24	3,305	P.B. 3,201
Shell Oil Co., No. 2 McKeon, Midway-Sunset, Kern Co.	22-32-23	1,750	O.S. drlg.
Linderman Oil Corp., No. 1 Midway-Sunset, Kern Co.	22-32-23	2,135	sd. sh. drlg.
U. S. Pump Co., No. 1 Midway-Sunset, Kern Co.	12-11-24	1,731	sd. sh. drlg.
Texas Co., No. 20 Midway-Sunset, Kern Co.	32-32-24	2,925	O.S. drlg.
Texas Co., No. 21 Midway-Sunset, Kern Co.	32-32-24	2,601	sd. sh. drlg.
Union Oil Co., No. 5 Keene, Midway-Sunset, Kern Co.	22-32-23	2,030	pump. 370 b.d.
Hancock Oil Co., No. 6 Midway-Sunset, Kern Co.	8-11-23	3,121	sd. sh. drlg.
Valley Oil Co., No. 1 Midway-Sunset, Kern Co.	18-32-23	2,841	idle
Alford Oil Co., No. 8 Fried, Midway-Sunset, Kern Co.	25-12-24	2,924	pump. 640 b.d.
Quality Oil Co., No. 5 Bull, Midway-Sunset, Kern Co.	22-32-23	2,185	pump. 122 b.d.
Quality Oil Co., No. 5 W.P., Midway-Sunset, Kern Co.	27-32-23	2,202	O.S. drlg.
Honolulu Oil Corp., No. 46 Midway-Sunset, Kern Co.	14-32-24	3,625	bailing
Petrolia Royalties, No. 1 Midway-Sunset, Kern Co.	21-32-22	1,160	pump. 30 b.d.
Evans, Hugh, No. 16 Midway-Sunset, Kern Co.	35-32-23	2,230	sd. sh. drlg.
Elk Hills Pet. Co., No. 1 Elk Hills, Kern Co.	14-31-24	7,412	idle

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Reserve Oil & Gas Co., No. 33-1 Tejon, Kern Co.	33-11-19	4,969	idle
Reserve Oil & Gas Co., No. 33-2 Tejon, Kern Co.	33-11-19	4,474	shut in
Reserve Oil & Gas Co., No. 33-3 Tejon, Kern Co.	33-11-19	4,431	shut in
Reserve Oil & Gas Co., No. 2-6 Tejon, Kern Co.	2-10-19	971	sd. sh. drlg.
Ohio Oil Co., No. 2 Tejon, Kern Co.	21-11-19	8,135	sd. sh. drlg.
Western Gulf, No. 2 Cantua, Fresno Co.	3-17-15	8,530	P.B. 6,580
Tide Water Assoc., No. 3 Kettleman North, Fresno	35-21-17	8,858	P.B. 7,650
Union Oil Co., No. 2 King, Kettleman North, Fresno	29-21-17	8,500	redrlg. 7,840
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	9,715	sd. sh. drlg.
K. N. D. A., No. 56-28-J Kettleman North, Fresno Co.	28-21-17	7,089	sd. sh. drlg.
K. N. D. A., No. 65-28-J Kettleman North, Fresno Co.	28-21-17	7,765	sd. sh. drlg.
K. N. D. A., No. 78-28-J Kettleman North, Fresno Co.	28-21-17	6,175	br. sh. drlg.
K. N. D. A., No. 2-34-J Kettleman North, Fresno Co.	34-21-17	2,465	sd. sh. drlg.
K. N. D. A., No. 32-34-J Kettleman North, Fresno Co.	34-21-17	4,421	sd. sh. drlg.
K. N. D. A., No. 63-34-J Kettleman North, Fresno Co.	34-21-17	7,570	sd. sh. drlg.
K. N. D. A., No. 61-4-P Kettleman North, Fresno Co.	4-22-17	7,060	br. sh. drlg.
Standard Oil, No. 38-33-J Kettleman North, Fresno	33-21-17	7,975	sd. sh. drlg.
Standard Oil, No. 81-33-J Kettleman North, Fresno	33-21-17	7,042	sd. sh. drlg.
Standard Oil, No. 4-3-P Kettleman North, Fresno	3-22-17	2,531	sd. sh. drlg.
Standard Oil, No. 78-3-P Kettleman North, Kings Co.	3-22-17	7,460	sd. sh. drlg.
Temblor Oil Co., No. 1-B Kettleman Middle, Kings	25-23-18	5,935	redrlg. 5,578
Clare, A. S., No. 1 Corcoran, Kings Co.	30-20-22	671	sd. sh. drlg.
Tri-Counties Oil Co., No. 1 Tulare Lake, Kings Co.	10-23-22	3,015	sd. sh. drlg.
Stone, G. S., No. 1 Tulare Lake, Kings Co.	25-20-20	1,101	idle
Barnsdall Oil Co., No. 1 K. C. L., San Luis Obispo Co.	1-32-20	4,451	sd. sh. drlg.
Burkholder Oil Co., No. 1 Clay, San Luis Obispo Co.	14-10-26	2,690	sd. sh. drlg.
Burch, I. L., No. 1 Clay, San Luis Obispo Co.	4-10-26	3,216	sd. sh. drlg.
Calif. Producing Co., No. 1 Pattiway, San Luis Obispo	19-10-24	751	sd. sh. drlg.
Temblor Oil Co., No. 1 Panorama, San Luis Obispo Co.	22-32-21	920	form. test
Lewis, A. O., No. 1 Pecho, San Luis Obispo Co.	34-30-10	2,375	sd. sh. drlg.
Gretna Corp., No. 1 Islay, San Luis Obispo Co.	24-30-10	520	sd. sh. drlg.
Martin, J. D., No. 4-A Pismo, San Luis Obispo Co.	5-32-13	3,300	idle
Pismo Pet. Co., No. 1 Pismo, San Luis Obispo Co.	5-32-13	4,225	fish. D.P.
Texas Co., No. 1 King City, Monterey Co.	30-19-7	4,759	dry; abd.
Anderson, Amil, No. 1 Cholame, Monterey Co.	15-24-14	510	idle
Shell Oil Co., No. 1 Pleyto, Monterey Co.	34-24-10	8,994	P.B. 8,750
Shell Oil Co., No. 2 Pleyto, Monterey Co.	34-24-10	8,202	sd. sh. drlg.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	7,418	cleaning out
Amerada Pet. Co., No. 2 Emigh, Rio Vista, Solano Co.	35- 4-2	4,505	sd. sh. drlg.
Tide Water A. O. Co., No. 1 Sargent, San Benito Co.	5-12-4	6,900	sd. sh. drlg.
Buttes Oilfields, Ltd., No. 1 Kent, Sutter Co.	2-15-1	5,810	sd. sh. drlg.
Jennings, E. P., No. 1 Allensworth, Tulare Co.	4-24-23	2,709	cleaning out
Standard Oil Co., No. 3 McDonald, San Joaquin Co.	24- 2-4	5,337	sd. sh. drlg.
Coast Expl. Co., Well No. 1, San Joaquin Co.	2- 3-4	3,340	dry; abd.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location:	S.T.R.	Depth	Status
Richfield Oil Co., No. 5 El Segundo, Los Angeles Co.	18- 3-14	6,991	sd. sh. drlg.
Richfield Oil Co., No. 1 S.F., El Segundo, Los Angeles	18- 3-14	7,097	sd. sh. drlg.
Ohio Oil Co., No. 3 El Segundo, Los Angeles Co.	7- 3-14	7,094	cementing
Texas Co., No. 2-2 El Segundo, Los Angeles Co.	17- 3-14	2,854	sd. sh. drlg.
Texas Co., No. 2 Security, El Segundo, Los Angeles	18- 3-14	5,898	sd. sh. drlg.
Standard Oil Co., No. 1 Refy, El Segundo, Los Angeles	13- 3-15	2,580	sd. sh. drlg.
Republic Pet. Co., No. 6 El Segundo, Los Angeles Co.	18- 3-14	503	idle
Republic Pet. Co., No. 8 El Segundo, Los Angeles Co.	18- 3-14	4,977	sd. sh. drlg.
Union Oil Co., No. 2 El Segundo, Los Angeles Co.	18- 3-14	7,620	O.S. drlg.
Signal Finance Co., No. 1 Hawthorne, Los Angeles	10- 3-14	9,395	idle
C. C. M. Oil Co., No. 15 Torrance, Los Angeles Co.	31- 3-14	4,515	pump. 158 b.d.
Abrams, J., & Assoc., No. 1 Torrance, Los Angeles	16- 4-14	4,518	sd. sh. drlg.
Calmore Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,724	pump. 250 b.d.
Swyer Oil Co., No. 1 Torrance, Los Angeles Co.	18- 4-14	4,400	pump. 245 b.d.
Weber-Butler Oil Co., No. 2 Torrance, Los Angeles	16- 4-14	2,791	sd. sh. drlg.
McLaren & Assoc., No. 1 Palos Verdes, Los Angeles	27- 4-14	3-992	redrlg. 1,860
Standard Oil Co., No. 83 Inglewood, Los Angeles Co.	8- 2-14	3,655	sd. sh. drlg.
Shell Oil Co., No. 90 Reyes, Dominguez, Los Angeles	33- 3-13	9,100	O.S. drlg.
Shell Oil Co., No. 91 Reyes, Dominguez, Los Angeles	33- 3-13	981	cmtd. 976
Union Oil, No. 50 Callender, Dominguez, Los Angeles	33- 3-13	10,435	cmtd. 10,050
Union Oil, No. 52 Callender, Dominguez, Los Angeles	33- 3-13	4,576	sd. sh. drlg.
Union Oil, No. 7 Carson, Dominguez, Los Angeles	33- 3-13	7,205	cleaning out
Union Oil, No. 46 Hellman, Dominguez, Los Angeles	33- 3-13	5,290	cmtd. 5,205
Barnsdall Oil, No. 12 O'Dea, Rosecrans, Los Angeles	18- 3-13	6,450	sd. sh. drlg.
Union Oil Co., No. 16 Rosecrans, Los Angeles Co.	18- 3-13	4,190	sd. sh. drlg.
Metropolitan Oil, No. 1 Playa Del Rey, Los Angeles	34- 2-15	2,674	sd. sh. drlg.
Union Oil, No. 17 D.R., Playa Del Rey, Los Angeles	27- 2-15	5,486	sd. sh. drlg.
Burt, A. G., No. 1 Newhall, Los Angeles Co.	36- 4-17	1,050	sd. sh. drlg.
Premier Pet. Co., No. 1 Wilmington, Los Angeles Co.	33- 4-13	2,550	sd. sh. drlg.
Sunrise Oil Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	3,490	sd. sh. drlg.
General Pet., No. 1 Ford, Wilmington, Los Angeles	4- 5-13	3,600	flow. 1,510 b.d.
General Pet., No. 3 Ford, Wilmington, Los Angeles	4- 5-13	4,066	deep test
General Pet., No. 4 Ford, Wilmington, Los Angeles	4- 5-13	3,590	flow. 1,645 b.d.
General Pet., No. 5 Ford, Wilmington, Los Angeles	4- 5-13	3,600	flow. 1,752 b.d.
General Pet., No. 8 Ford, Wilmington, Los Angeles	4- 5-13	1,570	sd. sh. drlg.
General Pet., No. 1-I Wilmington, Los Angeles Co.	4- 5-13	2,536	sd. sh. drlg.
General Pet., No. 2-P Wilmington, Los Angeles Co.	4- 5-13	3,575	flow. 530 b.d.
Getty Oil Co., No. 7 Wilmington, Los Angeles Co.	33- 4-13	3,610	flow. 734 b.d.
Getty Oil Co., No. 8 Wilmington, Los Angeles Co.	33- 4-13	3,000	sd. sh. drlg.
Getty Oil Co., No. 9 Wilmington, Los Angeles Co.	33- 4-13	2,397	sd. sh. drlg.
Holly Dev. Co., No. 1 Wilmington, Los Angeles Co.	33- 4-13	1,952	sd. sh. drlg.
Jergins Trust, No. 1 Wilmington, Los Angeles Co.	34- 4-13	2,365	sd. sh. drlg.
Jergins Trust, No. 2 Wilmington, Los Angeles Co.	34- 4-13	2,529	sd. sh. drlg.
Burnoel Pet. Co., No. 960 Wilmington, Los Angeles	33- 4-13	3,579	flow. 191 b.d.
Westport Oil Co., No. 6 Wilmington, Los Angeles Co.	33- 4-13	3,595	flow. 510 b.d.
Olympic Ref. Co., No. 1 fee, Wilmington, Los Angeles	33- 4-13	2,464	sd. sh. drlg.
Bankline Oil, No. 12-P.T., Wilmington, Los Angeles	34- 4-13	3,030	sd. sh. drlg.
Bankline Oil, No. 1 Chuck, Wilmington, Los Angeles	33- 4-13	2,280	sd. sh. drlg.
Pongratz Oil Co., No. 1 Wilmington, Los Angeles Co.	33- 4-13	3,565	pump. 600 b.d.
Pacific Western Oil, No. 2-P Wilmington, Los Angeles	32- 4-13	2,291	sd. sh. drlg.
Macmillan Pet., No. 1-H, Wilmington, Los Angeles	33- 4-13	2,560	sd. sh. drlg.
Interstate Inv., No. 1-K, Wilmington, Los Angeles	5- 5-13	2,391	sd. sh. drlg.
Union Pacific, No. 7 Wilmington, Los Angeles Co.	4- 5-13	3,550	O.S. drlg.
Union Pacific, No. 8 Wilmington, Los Angeles Co.	33- 4-13	3,581	O.S. drlg.
Union Pacific, No. 10 Wilmington, Los Angeles Co.	3- 5-13	2,775	sd. sh. drlg.
Union Pacific, No. 14 Wilmington, Los Angeles Co.	3- 5-13	2,721	sd. sh. drlg.
Union Pacific, No. 17 Wilmington, Los Angeles Co.	4- 5-13	2,194	sd. sh. drlg.
Union Pacific, No. 18 Wilmington, Los Angeles Co.	4- 5-13	2,538	sd. sh. drlg.
Union Pacific, No. 19 Wilmington, Los Angeles Co.	3- 5-13	2,542	sd. sh. drlg.
Wilbur, V.R.G., No. 1-W Wilmington, Los Angeles Co.	28- 4-13	3,415	sd. sh. drlg.
Ring Oil Co., No. 1 Wilmington, Los Angeles Co.	5- 5-13	3,725	rig. to pump
Ring Oil Co., No. 2 Wilmington, Los Angeles Co.	5- 5-13	2,623	sd. sh. drlg.
Royalty Service, No. 20-5 Wilmington, Los Angeles	33- 4-13	1,176	sd. sh. drlg.
Royalty Service, No. 3-C Wilmington, Los Angeles	5- 5-13	3,639	flow. 196 b.d.
Royalty Service, No. 5-C Wilmington, Los Angeles	33- 4-13	2,297	sd. sh. drlg.
Royalty Service, No. 1-M Wilmington, Los Angeles	4- 5-13	3,550	flow. 963 b.d.
Royalty Service, No. 2-M Wilmington, Los Angeles	33- 4-13	3,552	sd. sh. drlg.
Gilmore Oil Co., No. 23-7 Wilmington, Los Angeles	33- 4-13	2,520	sd. sh. drlg.
Gilmore Oil Co., No. 17-5 Wilmington, Los Angeles	33- 4-13	3,510	sd. sh. drlg.
Graham-Loftus Oil, No. 1 Wilmington, Los Angeles	33- 4-13	3,400	sd. sh. drlg.
Godsford Oil Co., No. 1-W Wilmington, Los Angeles	33- 4-13	1,725	sd. sh. drlg.
Gauthier Oil Co., No. 2 Wilmington, Los Angeles Co.	27- 4-13	3,740	idle
Wilmington Oil Dev., No. 3 Wilmington, Los Angeles	33- 4-13	3,545	flow. 480 b.d.
Sunrise Pet. Co., No. 1 Wilmington, Los Angeles Co.	33- 4-13	3,478	sd. sh. drlg.
Richfield Oil, No. 2 Ciocca, Montebello, Los Angeles	5- 2-11	1,541	sd. sh. drlg.
Richfield Oil, No. 1 Estrada, Montebello, Los Angeles	5- 2-11	4,173	P.B. 3,885
Texas Co., No. 16 Baldwin, Montebello, Los Angeles	6- 2-11	6,010	P.B. 5,738
St. Helens Pet., No. 6 P. & B., Montebello, Los Angeles	5- 2-11	7,199	pump. 15 b.d.
Union Oil Co., No. 26 Montebello, Los Angeles Co.	1- 2-12	4,267	rig. to pump
Universal Consd., No. 1-F Montebello, Los Angeles	5- 2-11	3,361	sd. sh. drlg.
Hilltop Oil Co., No. 1 Long Beach, Los Angeles Co.	19- 4-12	2,850	sd. sh. drlg.
Clayton, G. L., No. 1 North Long Beach, Los Angeles	32- 3-12	4,625	sd. sh. drlg.
Caltana Corp., No. 1 Artesia, Los Angeles Co.	11- 4-12	4,790	sd. sh. drlg.
General Pet., No. 27 Santa Fe Springs, Los Angeles	5- 3-11	3,652	sd. sh. drlg.
Hathaway, No. 2 Fulton, Santa Fe Springs, L. Angeles	6- 3-11	4,615	rig. to pump
Union Oil, No. 100 Santa Fe Springs, Los Angeles Co.	6- 3-11	10,789	fish. D.P.
Julian & Criswell, No. 1 Walnut, Los Angeles Co.	5- 2-9	1,450	will P.B.
Standard Oil Co., No. 28 S.G., Seal Beach, Orange Co.	11- 5-12	2,985	sd. sh. drlg.
Tide Water A. O. Co., No. 16-B Seal Beach, Orange	11- 5-12	2,563	sd. sh. drlg.
Holly Oil Co., No. 7-A Huntington, Orange Co.	35- 5-11	3,597	sd. sh. drlg.
Re-Mine Oil Co., No. 2 Huntington, Orange Co.	2- 6-11	4,570	cleaning out
Texas Co., No. 8 Brown, Huntington, Orange Co.	11- 6-11	4,148	pump. 249 b.d.
Tide Water A. O., No. 55 M.K., Huntington, Orange	2- 6-11	1,661	sd. sh. drlg.
West American, No. 14 Huntington, Orange Co.	34- 5-11	2,510	sd. sh. drlg.
Orco Oil Co., No. 5 Huntington, Orange Co.	2- 6-11	4,697	redrlg. 3,252
Union Oil Co., No. 10-C Huntington, Orange Co.	34- 5-11	4,219	sd. sh. drlg.
Union Oil Co., No. 16-C Huntington, Orange Co.	34- 5-11	5,105	cleaning out
Commander Oil Co., No. 1 Newport, Orange Co.	29- 6-10	7,198	br. sh. drlg.
Fullerton Oil Co., No. 20 Brea, Orange Co.	2- 3-10	5,483	P.B. 4,010
Standard Oil Co., No. 63 Emery, West Coyote, Orange	24- 3-11	4,140	sd. sh. drlg.
Hogan Pet. Co., No. 1 McNally, West Coyote, Orange	23- 3-11	4,910	sd. sh. drlg.
Bandini Pet. Co., No. 1-B East Coyote, Orange Co.	24- 3-10	1,132	sd. sh. drlg.
Bartholomae Oil Co., No. 4 East Coyote, Orange Co.	22- 3-10	1,597	sd. sh. drlg.
Kelly, Thomas, No. 11 East Coyote, Orange Co.	24- 3-10	1,295	sd. sh. drlg.
Union Oil Co., No. 20 Hole, East Coyote, Orange Co.	22- 3-10	3,027	sd. sh. drlg.
Shell Oil Co., No. 1 Mathis, Anaheim, Orange Co.	23- 4-10	5,961	P.B. 4,481
Joseph, Arthur, No. 1 Richfield, Orange Co.	29- 3-9	3,668	cmtd. 3,650
Principal Oil Co., No. 1 Richfield, Orange Co.	36- 3-9	1,574	sd. sh. drlg.

KANSAS

Week Ending May 1 (Descriptions are East unless marked otherwise)

Barber County

Pryor & Lockhart No. 1 Gant, C SE sec. 7-31-13w. Rig.

Barton County

S. E. Bailey No. 1 Hammeke, NE NE SW sec. 12-18-12w. O.W.D.D.; S.D. 2,100 ft.

C. L. Carlock No. 1 Ehlv, NE NE SE sec. 5-18-11w. Sil. 3,350 ft.; T.D. 3,390 ft.; R.U.S.T.

Continental Oil Co. No. 1 Lamatseh, SW NE NE sec. 26-17-12w. Drlg. 250 ft.

George Dickey et al No. 1 Boger, SE SE NE sec. 15-16-13w. Drlg. 2,535 ft.

J. B. Hanna No. 1 Luce, SW cor. sec. 21-20-13w. Rig.

Hinkle et al No. 1 Frederick, NW cor. sec. 12-16-13w. Sil. 3,372 ft.; H.F.W. 3,389-91 ft.; D.&A.

C. L. Price et al No. 1 Kraft, SW NW NE sec. 10-17-11w. T.D. 3,237 ft.; acd.; P. 160 B.O. in 5 hrs.; to reset 7-in.

Stanolind O. & G. Co. No. 1 Meggars, SW cor. sec. 21-20-11w. Cg. 3,295 ft.

Stanolind O. & G. Co. No. 1 Struder, SE SE SW sec. 26-16-13w. R.U.R.

Vickers Pet. Co. et al No. 1 Leibel, SE NE SE sec. 18-18-11w. U.R. 8-in. 2,575 ft.

E. F. Wakefield et al No. 1 Scheuerman, NE NE SW sec. 31-16-15w. S.D. 2,470 ft.

C. H. Weaver et al No. 1 Stumps, NE cor. sec. 3-17-12w. Drlg. 2,075 ft.

Butler County

Kahn et al No. 1-A Madden, SW SW NE sec. 27-23-4. K.C. 2,065 ft.; T.D. 2,218 ft.

Sid Neff et al No. 1 Church, SW NE SE sec. 8-28-5. O.W.D.D.; T.D. 1,875 ft.; D. &A.

C. L. Seibel et al No. 1 Bisagno, SE SE NW sec. 24-25-6e. T.D. 2,743 ft.; U.R. 6-in.

Vickers Pet. Co. No. 1 Voth, C N½ NE NE sec. 32-24-4e. Drlg. 2,439 ft.

Chase County

Propp et al No. 1 Fromm, SE cor. sec. 29-18-9e. Set 6-in. 2,450 ft.

Chautauqua County

Ira Scott et al No. 1 Lamba, SW NW NE sec. 18-33-13. Drlg. 1,530 ft.

E. J. Shaffer No. 1 Nuckolls, NW cor. sec. 12-33-19. Drlg. 1,325 ft.

W. M. McKnabb No. 1 Griffith, SW cor. sec. 11-32-10. K.C. 1,320 ft.; H.F.W. 2,-081 ft.; D.&A.

Cowley County

Bess & Gralapp et al No. 1 Wakefield, NE SE SW sec. 18-30-6. Drlg. 1,512 ft.

Elmer Ash et al No. 1 Bolack, NW NW SE sec. 22-32-6. Set 12-in. 1,431 ft.; C.O. 1,440 ft.

Murta & Wilson No. 1 Turner, NE NE NW sec. 30-32-6. Rig.

McCoy et al No. 1 Anderson, SE NW NE sec. 34-34-6. Drlg. 570 ft.

Tom Palmer No. 1-A Lowe, SW SE SE sec. 3-32-5. Sil. 3,588-89 ft.; D.&A.

Ryan Consolidated Co. No. 1 Couch, SW SW SE sec. 13-30-5. Bart. 2,796 ft.; pay 2,837-42 ft.; S. 70 B.O. in 19 hrs.; est 15 B.W.

Decatur County

C. L. Bruce et al No. 1 Newbold, C NE SE sec. 34-2s-28w. R.U.R. and S.D.

Edwards County

Royal Pet. Co. et al No. 1 Krupp, NW NW SE sec. 18-24-19w. Anhy. 1,366 ft.; whipstock 2,240 ft.

Ellis County

Billings No. 1 Smith, SE SE NW sec. 14-12-16w. Drlg. 1,005 ft.

Bridgeport Machine Co. et al No. 1 Froelick, NW NW SE sec. 4-13-16w. Set 8-in. 2,700 ft.; C.O.

Elwell and Tree Oil Co. No. 1 Wickham, SW SW NE sec. 10-11-19w. Drlg. 1,456 ft.

Ted Kors et al No. 1 Koblitz, SE SW NW sec. 23-12-18w. Pay 3,694-98 ft.; swb. 48 B.O. and swbd. down; T.D. 3,699 ft.; P.B. 3,697½ ft.; P. 13 B.O. and pumped off.

Lario O. & G. Co. et al No. 1 Henderson, SW SW NE sec. 27-11-18w. Anhy. 1,294 ft.; drlg. 2,240 ft.

Murphy Oil Co. No. 1 Wiesner, SE SE SW sec. 12-14-19w. K.C. 3,480 ft.; drlg. 3,-784 ft.

J. J. Muth No. 1 Penney, NW SE SE sec. 29-14-18w. Spd. and S.D.

Noble Pet. Corp. No. 1 O'Laughlin, NW NW SE sec. 13-12-19w. Drlg. 3,230 ft.

J. C. Shaffer, Inc., No. 1 Staab, SE cor sec. 25-12-18w. R.U.R.

Twin Drlg. Co. et al No. 1 Craig, NE NE SE sec. 6-11-16w. Rig.

Earl Wakefield No. 1 Putnam Mortgage Co., SE SE NW sec. 32-15-17w. Cong. 3,443 ft.; U.R. 5-in. 3,483 ft.

Ellsworth County

Frost et al No. 1 Dolechek, NE NE SW sec. 36-14-8w. K.C. 2,671 ft.; H.F.W. 2,840-50 ft.; run 6-in. csg. 3,020 ft.

Orville Lea No. 1 Larkin, NW cor. sec. 15-16-8w. Drlg. 390 ft.

Greenwood County

B. & B. Oil Co. No. 1 Webb, C NE SE sec. 3-26-13. Drlg. 300 ft.

L. S. Bolwanz No. 1 Travelers, C SW SW sec. 23-26-10. Fsg. 1,745 ft.

Ohio Oil Co. No. 1 Schwab, SE SW SE sec. 9-24-10. Viola 2,763-66 ft., acd.; P. 3 B.O. and 100 B.W.P.D.

Shull Drlg. Co. No. 1 Cannon, NE SE NE sec. 23-25-12. Miss. 1,815 ft.; drlg. 1,-840 ft.

Hamilton County

Denver Prod. & Ref. Co. No. 1 Porter, SW SW NE sec. 30-25-41w. Rig.

Harper County

Bell O. & G. Co. et al No. 1 Austin, SE NE NE sec. 28-23-1e. Rig.

Carter Oil Co. et al No. 1 Selhart Est., C SW NW sec. 4-34-8w. S.O.&G. 4,580-95 ft.; drlg. 4,815 ft.

Harvey County

Shaffer & Shawver No. 1 Hege, NE NE SE sec. 26-22-2w. Rig.

Kearny County

J. L. Murphy No. 1 Masonic Home, C NW sec. 1-26-36w. R.U.R.

Logan County

W. H. Boucher No. 1 Wright, C SE SE sec. 12-15-35w. K.C. 4,060 ft.; drlg. 4,-592 ft.

Lyon County

Davis & Sory No. 1 Byrd, SW SW SE sec. 32-21-11. S.D. 590 ft.

Young et al No. 1-A Murphy, SE NW NE sec. 32-21-11. S.D. 1,380 ft.

McPherson County

Bradley Bros. No. 1 Barnholt, SW SW SE sec. 30-30-5w. Drlg. 2,265 ft.

Fred C. Frank et al No. 1 Doles, SE NW NE sec. 12-19-1w. S.D. 600 ft.

Hutchinson O. & G. Co. et al No. 1 Berg, SW SW SE sec. 15-20-3w. Wilcox 3,606-13 ft.; D.&A.

Lauck & Moncrief No. 1 Crehbiel, SE SE SW sec. 27-21-2w. Chat 3,047 ft.; drlg. 3,054 ft.

Smith et al No. 1 Larson, NW NW SW sec. 35-18-5w. Drlg. 390 ft.

Wamhoff et al No. 1 Nuse, SE NE SW sec. 18-18-4w. Set 10-in. 110 ft.; W.O.C.

Mitchell County

Geo. Siedhoff et al No. 1 Greiss, SW SW SE sec. 16-8-10w. K.C. 2,710 ft.; H.F.W. 2,835-45 ft.; U.R. 8-in.

Ness County

Jones & Lane No. 1 Page Milling Co., SE SE NW sec. 36-18-26w. Rig.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Drlg. 4,200 ft.

Osborne County

J. E. Waldron No. 1 Neuschwanger, SE NE NW sec. 11-8-14w. Spd. and S.D.

Pawnee County

Capshaw et al No. 1 Riederer, C W½ NW SE sec. 29-21-19w. K.C. 3,700 ft.; drlg. 4,100 ft.

Reno County

Imo O. & G. Co. and others No. 1 Watkins, SE cor. sec. 14-22-7w. Drlg. 1,700 ft.

Clyde Pulse No. 1 Payne, SW NW SE sec. 4-22-7w. Cong. 3,398 ft.; Chat. 3,426 ft.; H.F.W. 3,440 ft., T.D.; P.B. 3,287 ft.; fsg.

Olson Drlg. Co. et al No 1 Herriman, NW cor. sec. 22-24-8w. Viola 4,068 ft.; Simp. 4,074 ft.; Sil. 4,154 ft.; T.D. 4,193 ft.; D.&A.

Sinclair Prairie Oil Co. No. 1 Natt, NW NW SE sec. 32-26-4w. K.C. 2,818 ft.; drlg. 3,410 ft.

Westgate-Greenland Oil Co. No. 1 O'Sullivan, SW SW NE sec. 24-23-5. Drlg. 3,630 ft.

Rice County

Comanche Oil Co. No. 1 Cramm, SW SW SE sec. 15-19-9w. R.U.

L. E. Douglass No. 1 Coyne, NE SE SE sec. 24-21-8w. 4 B.W. 2,510-70 ft.

Empire O. & R. Co. No. 1 Bredfeldt, C N½ N½ SW sec. 7-18-9w. Drlg. 2,684 ft.

John Hanna et al No. 1 Fulton, NW NW NE sec. 24-10-6w. Drlg. 2,827 ft.

Hipple et al No. 1 Wernet, NE NE NW sec. 11-20-6w. Drlg. 870 ft.

T. C. Johnson No. 1 Shubert, SW cor. sec. 9-20-10w. Sil. 3,426-29 ft.; D.&A.

Fred Phillips et al No. 1 Hubenett, SW NW SW sec. 23-20-6w. Set 8-in. csg. 2,710 ft.; C.O.

C. E. W. Skiles et al No. 1 Helmer, NW NW NE sec. 7-19-18w. R.U.

Union Oil & Refining Co. et al No. 1 Baker, SW SW NE sec. 33-20-6w. Drlg. 2,780 ft.

W. E. Witt et al No. 1 Fair, NW SE SE sec. 4-22-8w. S.D. 1,890 ft.

Rooks County

Basin Oil Co. No. 1 Baxa, NE cor. sec. 23-9-17w. K.C. 3,295 ft.; drlg. 3,297 ft.

Brunson Drlg. Co. et al No. 1 Casey, SE SE NE sec. 22-9s-16w. U.R. 15-in. at 775 ft.

Buckner & Schoff No. 1 McConnel, NE cor. sec. 34-6s-18w. Sil. 3,536-42 ft.; D. &A.

Graham et al No. 1 Fike, SW cor. sec. 9-9-17w. T.D. 3,301 ft.; fsg.

S. C. Hoel et al No. 1 Ives, SW SW NE sec. 11-7-18w. S.D. 485 ft.

Jones Bros. No. 1 Wiss, NW cor. sec. 8-10-18w. U.R. 8-in. at 2,980 ft.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. S.S.O. 3,610-13 ft.; drlg. 3,673 ft.

Rush County

Duwe & Brouk No. 1 Lebsack, SE SE NE sec. 13-16-16w. Run 12-in. 535 ft.

S. A. Murphy et al No. 1 Roth, NW NW SW sec. 21-16-18w. Anhy. 1,159 ft.; T.D. 2,605 ft. (cor.); est. 15,000,000 ft. gas. C.O.

Russell County

Aylward et al No. 1 Jones SE SE NW sec. 23-14-13w. Rig.

Equity Gas Co. No. 1 Harbaugh, NW NE SW sec. 19-13-12w. S.D. 1,580 ft.

Goldstein and Vernon Oil & Gas Co. No. 1 Steinert Estate, NE SE NW sec. 34-15-15w. Drlg. 615 ft.

S. M. Murphy et al No. 1 Deines, SE SE SW sec. 36-15-15w. Fsg. 2,500 ft.

Scott County

Olson Drlg. Co. et al No. 1 Nolan, NW NW NE sec. 13-19-33w. Set 15-in. 292 ft.; W.O.C.

Sedgwick County

Cameron et al No. 1 Smith, SW SE SE sec. 13-27-2e. Viola 3,125 ft.; H.F.W. 3,144-47 ft.

Empire O. & R. Co. No. 1 Kimel, NW cor. sec. 4-29-2w. Simp. 4,094 ft.; T.D. 4,131 ft.; D.&A.

Roxana Drlg. Co. et al No. 1 Woodman, SW NW SW sec. 26-26-1w. S.D. 2,469 ft.

E. B. Shawver No. 1 Furman, SW NE SE sec. 24-29-3w. U.R. 13-in. at 1,616 ft.

E. M. Swearer et al No. 1 Thome, SW SW NW sec. 19-28-1w. Base Miss. 3,660 ft.; drlg. 3,690 ft.

Stafford County

W. P. Faulkner No. 1 Schulz, SE SE NE sec. 6-22-13w. R.U.

Sumner County

Glimac Oil Co. et al No. 1 Proud, SW SE SE sec. 33-30-1w. S.D. 450 ft.

Graham et al No. 1 Dawson, NW NW NW sec. 4-33-2w. Base Miss. 4,250 ft.; fsg. 4,255 ft.

Texas Co. No. 1 Harper, NE SW SE sec. 9-20-3w. Chat 3,817 ft.; R.U.S.T. 3,827 ft.

Trego County

W. I. Southern, Inc., No. 1 Latimer, NW NW SE sec. 19-15-22w. R.U.R.

Woodson County

B. & B. Oil Co. No. 1 Lockard, NW NW NE sec. 2-26-13e. Machine.

Harper et al No. 1 Miller, NW NE SE sec. 10-24-14. Miss. 1,623-73 ft.; D.&A.

Kansas O. & G. Corp. No. 1 Providence, SW SW SE sec. 6-24-15. Drlg. 1,122 ft.

Katz No. 1 Guy, SW SW SE sec. 6-24-15 Drlg. 750 ft.

Osage County

Helmerich & Payne et al No. 1 Osage, NE NE SW sec. 13-23-6. Set 10-in. 735 ft.

Payne County

Bill Riddle No. 1 Van Zandt, NW NW SE sec. 16-18-3e. T.D. 80 ft.; R.U.R.

Pontotoc County

W. A. Delaney et al No. 1 Norris, NW NW SE sec. 18-4-8. Spd.

Papoose Oil Co. et al No. 1 Jones, NW SE NW sec. 2-4-5. R.U.R.

Pottawatomie County

Mid-Continent Pet. Corp. No. 1-A Logan, NE NE SE sec. 31-11-5. Wilcox 4,839 ft.; T.D. 4,844 ft.; 1,800 ft. O.I.H.

Pushmataha County

Erle Halliburton et al No. 1 Bagwell, SW NE NE sec. 30-3s-15e. T.D. 1,293 ft.; S.D.

Seminole County

Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Reed, SE SW SE sec. 19-10-8. Cromwell 3,597 ft.; cg.

J. E. Hall et al No. 1 White, SE NW SE sec. 30-6-8. T.D. 2,610 ft.; P.B. 1,275 ft.; H.F.O.; P.O.P.

Sinclair Prairie Oil Co. No. 1 Rossanna, NW NW SW sec. 28-10-8. Wilcox 4,176 ft.; T.D. 4,189 ft.; acd.: F. 2,335 B.O. in 22 hrs.

A. I. Spears No. 1 Keaton, NW cor. sec. 6-5-8. Drlg. 2,560 ft.

Texas County

Cabot Carbon Co. No. 1 Calvert, C sec. 14-3n-16ecm. Drlg. 2,643 ft.

Cabot Carbon Co. No. 1 Castro, C SE sec. 19-3n-17ecm. T.D. 2,570 ft.; 3,600,000 ft. gas at 2,690 ft.; plugging back.

Missouri Valley Gas Corp. No. 1 well, C sec. 17-6n-14ecm. S.D. 2,257 ft.

Washita County

John Koberg No. 1 Harms, NW NW NE sec. 6-10-16w. Drk.

L. P. McWhirter No. 1 fee, NW SW SW sec. 34-8-19w. Drlg. 1,790 ft.

SOUTHERN OKLAHOMA

Atoka County

A. J. Sanders No. 3 Redden, SE SW SW sec. 19-1n-15e. T.D. 1,260 ft. (cor.); S.D.

Comanche County

E. B. Hane No. 1 Duper, NW cor. sec. 21-2n-13w. S.D. 250 ft. for csg.

C. V. Morris No. 1 Young, SE NE SE sec. 24-3n-10w. T.D. 1,008 ft.; D.&A.

Frank Scott No. 1-A Kuntz, SE NE SE sec. 21-4n-11w. T.D. 2,338 ft.; S.D. for csg.

Jefferson County

A. T. Campbell et al No. 2 Trout, NE SE NE sec. 6-8s-7w. Drlg. 1,400 ft.

Gulf Oil Corp. No. 1 Woodworth, NW NW NE sec. 20-3s-4w. Arbuckle 2,660 ft.; drlg. 2,810 ft.

Heenan & Coe et al No. 1 Rose, C SW SW sec. 1-5s-5w. Drlg. 2,760 ft.

Massad & Swansberger No. 1 Barrett, NE cor. SE SE sec. 14-6s-6w. T.D. 1,842 ft.; S.D.

Johnston County

Patton et al No. 1 McCrummens, SW SW NE sec. 16-1s-6e. T.D. 1,155 ft.; S.D.

Love County

Sinclair Prairie Oil Co. No. 1 Stockton, SE SE SW sec. 26-6s-2w. T.D. 8,583 ft.; P.B. 6,927 ft.; fsg. for tubg. at 5,288 ft.

Marshall County

Stuart & Taylor No. 1 Chestnut, NE cor. sec. 23-8s-5e. T.D. 788 ft.; P.B. 787 ft.; P. 40 bbls., 50% wtr.

Murray County

O. O. Owens No. 1 Fryer, NE SE NE sec. 34-1s-3e. T.D. 535 ft.; to set csg.

Power Oil Co. et al No. 1 Lancaster Trust, C SW NE sec. 10-1s-2e. T.D. 3,438 ft.; P.B. to 3,175 ft.; S.D.

J. Ben Russell No. 1 fee, SE SE NW SE sec. 9-2s-3e. Drlg. 1,815 ft.

Stephens County

Wm. Angle No. 1 Lang, SW SW NE sec. 24-1n-7w. Drlg. 110 ft.

William Angle No. 1 Posey, C NW NW sec. 8-1n-8w. T.D. 5,504 ft.; D.&A.

Carter Oil Co. No. 1 Harley, C NE NE sec. 24-2s-4w. Sylvan 4,871 ft.; drlg. 4,910 ft.

H. J. Edwards No. 1 Frederick, SW cor. NE SE NW sec. 31-2n-8w. T.D. 2,754 ft.; S.D.

Helmerich & Payne No. 1 Graham, SW SW NE sec. 12-1n-5w. T.D. 5,014 ft.; circulating.

B. F. Lundy No. 1 Calmes, NW SW SE sec. 35-1n-4w. Drlg. 3,878 ft.

Charles Newsom No. 1 Pfile, SW cor. sec. 1-2s-7w. Set 10-in. csg. 115 ft.; T.D.

Geo. L. Pace et al No. 1 Tah-Su-Dah, SE NW SW sec. 27-1s-9w. T.D. 2,138 ft.; rmg.

Tillman County

Magnolia Pet. Co. No. 1 Brown, SW SE NE sec. 21-3s-18w. Drlg. L. 2,950 ft.

OKLAHOMA

Week Ending May 1

NORTHERN OKLAHOMA

Alfalfa County

Olson Drlg. Co. et al No. 1 Acre, C SW NE sec. 14-24-11w. O.W.P.B.; swbg. 5,800 ft.

Beckham County

Carter Oil Co. No. 1 Bingham, NE cor. sec. 31-8-26w. Drlg. 170 ft.

Carter Oil Co. No. 1 Porter, C SW SW sec. 36-10-25w. Drlg. 485 ft.

Mid-American Oil Co. No. 1-A Biscoe, SW cor. sec. 28-8-22w. Drlg. 1,850 ft.

Caddo County

Clyde Becker et al No. 1 Pharris, SE SE NW sec. 24-6-12w. Tools on ground.

Cleveland County

W. R. Hollenbeck No. 1 Norman, NW NW NE sec. 17-9-2w. Oread 4,570 ft.; drlg. 5,085 ft.

Creek County

M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. Drlg. on bailer 2,935 ft.

Garfield County

Arab Oil Co. No. 1 Harkendorf, NE cor. sec. 34-20-3w. Drlg. 6,012 ft.

Ohio Oil Co. No. 1 State, SW cor. sec. 13-23-3w. Cleveland 3,925 ft.; drlg. 3,958 ft.

Garvin County

O. C. Myers et al No. 1 Howell, C SE NW sec. 34-1n-1e. T.D. 4,013 ft.; T.A.

Grady County

Western White Lily Oil Co. No. 1 Stover, SE SW NW sec. 33-3n-7w. T.D. 3,507 ft.; D.&A.

Greer County

Nelf-Godfrey-Andrea No. 1 Melton, SE NW SE sec. 16-3n-22w. Drlg. 1,770 ft.

Haskell County

Continental Oil Co. No. 1 Anderson, SW SE NE sec. 33-8-20. Set 16-in. 600 ft.; W.O.C.

Harmon County

Penn State Oil Co. No. 1 Cole, C W½ SW NW sec. 21-2n-26w. Cisco 3,625 ft.; Gr. Wsh. 4,145 ft.; drlg. 4,391 ft., sh.

Hughes County

Cap Rock Oil Co. No. 1 Parks, SW SW SE sec. 34-7-8. O.W.D.D.; drlg. 2,970 ft.

Chas. Thornton No. 1 Eason, NE NE NW sec. 7-9-11. Rig.

Kay County

Fortuna Oil Co. No. 1-A Harris, SW SW NE sec. 14-25-1e. S.D. at 383 ft.

Higdon et al No. 1 Nieman, NE NW NE sec. 9-26-3e. T.D. 317 ft.; S.D.

Kiowa County

Argus Pet. Co. No. 1 Osborne, NW cor. NE sec. 9-7-16w. S.O. 1,246-50 ft., in L.; S.D. for csg.

Kiowa Oil Corp. No. 1 Finder, C SW NE sec. 4-6-20w. Drlg. 130 ft.

Latimer County

Clark Drlg. Co. et al No. 1 Wilson, C SE SE sec. 15-5-18. T.D. 4,592 ft.; S.D. for repairs.

Le Flore County

Lynch et al No. 1 Tidwell, C NW SE sec. 17-3n-22. Set 8-in. 2,913 ft.; drlg. 2,976 ft.

Logan County

Anthony & Marshall No. 1 Fruin-Eckman, SE SE SW sec. 4-16-1e. T.D. 4,975 ft.; acid in hole to eliminate iron; no results; to reacidize.

Eason Oil Co. et al No. 1 Sisters, SW cor. sec. 24-17-1w. Drlg. 4,530 ft.

Helmerich & Payne et al No. 1 Randall, SW SW NW sec. 24-16-1w. Drlg. 1,950 ft.

Noble County

Lincoln Oil Co. et al No. 1-A Neil, NE cor. sec. 15-23-2w. Miss. 4,443 ft.; drlg. 4,581 ft.

Magnolia Pet. Co. No. 1 Forsythe, SE SE SW sec. 23-21-2w. Drlg. 2,232 ft.

Summit Drlg. Co. et al No. 1 Dolezal, SE SE SW sec. 8-22-1w. Drlg. 2,050 ft.

Okfuskee County

Mid-Continent Pet. Corp. No. 1 Gofford, NE NE NW sec. 35-12-7e. Wilcox 4,588 ft.; second Wilcox 4,631 ft.; T.D. 4,638 ft.; S.D.O.

Oklahoma Oil Corp. No. 1 Campbell, SE SE NE sec. 8-10-9. Rig.

ARKANSAS

Clark County

W. M. Martin No. 1 Coke, NW sec. 14-10-20. S.D. 1,002 ft.

Hempstead County

E. H. Moore, Inc., No. 1 Porterfield, NE cor. E½ SE¼ sec. 21-14-25. Loc.

Lafayette County

Carl B. King Drlg. Co. No. 1 Eben H. Woolcott, NE cor. sec. 36-19-26. Cg. 6,077 ft.

Little River County

Joe Strahan No. 1 Dierks, SW SE sec. 21-12-28. Fsg. 2,330 ft.

Lonoke County

Frank F. Silvers No. 2 Chambers, SW NE NW sec. 17-2n-7w. Loc.

Miller County

E. H. Moore No. 2 Dale, 660 ft. N and W, C sec. 24-15-26. Drlg. 3,795 ft.

E. H. Moore No. 3 Dale, 660 ft. W of No. 7, sec. 24-15-26. Drlg. 2,647 ft.

Nivla Oil Corp. No. 1 M.&P. Bank, NE SE SE sec. 18-15-26. Cg. 4,134 ft.

Miller County—Rodessa

McClanahan et al No. 1 W. L. Capps, sec. 11-20-28. 13-in. cmtd. 250 ft.; W.O.C.S.

Nevada County

Benedum & Trees No. 1 Grove, sec. 10-14-20. O.W.D.D.; T.D. 1,140 ft.; washing to bottom.

Benedum & Trees No. 9 Grove, NE NE SW sec. 10-14-20. R.U.; W.O.

Benedum & Trees No. 2 Mary Jackson, SE NE NE sec. 9-14-20. M.I.R.

Benedum & Trees No. 1 A. R. Mitchell, SE SW SE sec. 4-14-20. R.U.

Berry Asphalt Co. No. 2 J. Haynie, NE SE SW sec. 6-14-20. T.D. 1,239 ft.; cg. oil sd.; W.O.S.R.

Berry Asphalt Co. No. 3 W. Haynie, SE NE SW sec. 6-14-20. T.D. 1,166 ft.; W. O.S.R.

C. B. & F. Pet. Co. No. 2 W. Haynie, C NW SW NE sec. 6-14-20. 10-in. cmtd. 42 ft.; S.D.

Hall & Briscoe No. 2 Ritchie, NE NW SE sec. 10-14-20. 7-in. cmtd. 1,250 ft.

Wm. S. King No. 1, sec. 6-13-22. T.D. 2,610 ft.; Travis Peak; fsg. for D.S.; T.D. 2,897 ft.

A. M. Lacy No. 1 H. C. Bennett, SW SE sec. 24-14s-22w. Drk.

Walter Lowd No. 1 T. S. Grayson, SW SW SE sec. 12-14-20. T.D. 2,385 ft.; S.D.; W.O.

Shepard, Traylor & Jones No. 1 Purifey, NE NE sec. 17-11-20. 10-in. set 52 ft.

W. E. Stewart No. 1 Mendenhall, cen. SE NW NE sec. 1-14-20. T.D. 2,313 ft.; D. &A.

Ouachita County

Copenhaver Oil Corp. No. 1 J. E. Evans, C sec. 20-11-19. Drk.

H. H. Taylor No. 1 Joe McCree, NW SW NW sec. 21-13-19. R.U.

Pulaski County

A. L. Kilselman No. 2 Kilselman, Jr., SE SE SW sec. 2-1s-13e. Drlg. 804 ft.

Union County

Alice-Sydney Oil Co. No. 1 Morgan, NW NE SE sec. 18-18-17. 10-in. cmtd. 194 ft.; R.U.

Bruce Hunt No. 1 Robbins, 330 ft. N and E, SW SW SE sec. 12-19s-16. S.D. 50 ft.; curing titles.

Lion Oil No. 2-B Edna Morgan, SW NW SE sec. 18-18-17. S.D. 920 ft.; wtr.

McCreslenn Oil Co. No. 5 L. Atkins, SW SW NE sec. 3-18-13. R.U.

Marine Oil Co. No. 1 Marcus Justiss, NW¼ sec. 18-18-17. S.D. 1,100 ft.; for wtr.

Marine Oil Co. No. 6-E W. B. Thompson, SW NE NE sec. 10-18-13. Drlg. 2,875 ft.

Penn-Ark. Corp No. 1 W. N. Raulston, 330 ft. S and E, NW NW SE sec. 12-17-14. T.D. 2,983 ft.; W.O.S.R.

S. H. A. Oil Corp. No. 1 H. D. Warren, NE SW SW sec. 10-17-14. Drlg. out cmt. 3,342 ft. and W.O.S.R.; T.D. 3,342 ft.

Sklar No. 1-A Cordell, NE SE SW sec. 24-17-16. Comp.; pmp. 8 B.P.D.; T.D. 2,163 ft.

W. D. Wingfield et al No. 1 So. Kraft Corp., SW NE sec. 18-16-14. R.U.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

Drillers, Inc., No. 1 Glassell-Means, SW NE SE sec. 9-23-15. Drlg. 4,845 ft.

Gulf Oil No. 1 Campbell, C sec. 4-23-16. Comp.; flw. 171 B.P.D.; T.D. 6,050 ft.

J. Edw. Jones No. 2-B Sharp, NW C sec. 4-23-16. Tstg.; T.D. 6,070 ft.

J. Edw. Jones No. 4-A Sharp, SE C sec. 4-23-16. Comp.; flw. 80 B.P.D.; T.D. 6,047 ft.

Lion Oil Rfg. No. 1 Holm, NW SE SE sec. 9-23-15. Comp.; flw. 26 B.P.H.; T.D. 6,042 ft.

Lyons & Neely No. 1 Noel, SE cor. sec. 8-23-15. Comp.; 4,000,000 ft. gas; T.D. 6,060 ft.

Lyons & Neely No. 2 Noel, SW SE SE

sec. 8-23-15. Comp.; 3,000,000 ft. gas; T.D. 5,930 ft.

Marr et al No. 5 Hunter, sec. 13-23-16. O.W.D.D.; P.B. to 6,500 ft.; cmtd. 5-in. 6,510 ft.

R. W. Norton No. 2 L. C. Harden, 585 ft. E. 656 ft. N. SW cor. 56-ac. tr., sec. 20-23-16. Cg. 5,892 ft.

R. W. Norton No. 3 L. C. Harden, SW sec. 17-23-16. Drlg. 3,727 ft.

R. W. Norton No. 1 Payne, C SE SE sec. 27-23-16. 7-in. cmtd. 9,454 ft.; W.O.C.S.

R. W. Norton No. 4 Starke, 1,980 ft. N, 660 ft. E, SW sec. 16-23-16. Comp.; flw. 97 bbls. in 4 hrs.; T.D. 5,918 ft.

Standard Oil of La. No. 3 Armistead Comm., SE SE SE sec. 4-23-16. R.U.

Standard Oil Co. No. 1 L. J. Kaempfer, SE sec. 9-23-16. 7-in. cmtd. 5,930 ft.; T.D. 6,024 ft.

Standard Oil Co. No. 1 Sarah Kaempfer, NW NW NE sec. 9-23-16. 7-in. cmtd. 5,912 ft.; T.D. 5,915 ft.

United Gas No. 6 fee 574, SW NE NW sec. 16-23-16. Drlg. 3,062 ft.

United Gas No. 9 Bremer Unit, SW sec. 22-23-16. Drlg. 5,140 ft.

United Gas No. 1 A. B. Land Unit, NW sec. 32-23-16. 7-in. cmtd. 5,540 ft.; T.D. 5,610 ft.

United Gas No. 1 Starke, SE SW sec. 9-23-16. Drlg. 5,960 ft.

United Gas No. 5 Young, NW sec. 27-23-16. Cg. 6,689 ft.

N. LOUISIANA WILDCATS

Bienville Parish

DeSota O. & G. Co. No. 1 Ashley, SW SE sec. 15-16-10w. R.U.

Lide & Greer No. 1 W. J. Smellev, SE NW SW sec. 18-16-4w. Drlg. 5,540 ft.

Bossier Parish

Arkansas-La No. 2-B Werner, NE cor. sec. 7-17-11. Loc.

Havnes Drlg. Co. No. 1 A. J. Murff, NE SE sec. 35-17-12. T.D. 6,112 ft.; P.B. 4,427 ft.; D.&A.

Premier No. 7 Weaver, NW SE NW sec. 14-19-11. Comp.; pmp. 5 B.P.D.; T.D. 425 ft.

Premier Inv. Co. No. 39 Wyche, sec. 14-19-11. Drlg. 100 ft.

Producers O. & G. Co. No. 1 Hill Est., E½ NE¼ sec. 8-17-11. R.U.

Producers O. & G. No. 1 R. Johnson, NE sec. 5-17-11. R.U.

Tidwell et al No. 1 Natting, sec. 15-22-14. T.D. 2,954 ft.; S.D.

Triangle No. 2 Ross Unit, NW SW NW sec. 23-17-12. T.D. 5,180 ft.; cmtd. off perf.; W.O.C.S.

Triangle Drlg. Co. No. 2-A State, SW cor. sec. 23-17-12. Drlg. 4,900 ft.

United Gas No. 1 Henderson, NE cor. sec. 36-17-12. P.B. and tstg.; T.D. 4,400 ft.

United Gas No. 1 S. L. Herold, 660 ft. S and W, NE sec. 31-17-4. Loc.

United Gas No. 1-A Jeter Unit, SW sec. 24-17-12. Loc.

United Gas No. 2-I H. C. Skannal, SW sec. 25-17-12. R.U.

Caddo Parish

J. G. Abney No. 1 Thigpen & Herold, NW SW sec. 15-21-15. R.U.

Bayou State No. 5 Brown, SW SE NE sec. 28-22-15. Comp.; 200,000 ft. gas; T.D. 949 ft.

Calatex O. & G. No. 3-A Agurs, SW. cor. sec. 6-16-6. Drlg. 100 ft.

W. D. Chew No. 4 U. S. Govn., NW sec. 5-20-16. T.D. 949 ft.; D.&A.

W. D. Chew No. 1-D Leevy Bd., sec. 5-20-16. Comp.; pmp. 18 B.P.D.; T.D. 1,683 ft.

Paul Cooper No. 2 Rodgers, NW SW SW sec. 11-20-15. Drlg. 150 ft.

Custer Oil Co. No. 1 Wemple, N½ NW sec. 14-20-15. Drlg. 2,185 ft.

D. K. O. Oil Corp. No. 1 Player, SE NW SE sec. 26-21-15. T.D. 1,575 ft.; acidized; tstg. dry; W.O.

D. K. O. Oil Corp. No. 1 Tyson, SE NE sec. 17-21-15. 10-in. cmtd. 100 ft.

DeMaggo et al No. 1 Huckaby, SE NE SE sec. 26-22-16. T.D. 2,200 ft.; D.&A.

G.R.C. Oil Co. No. 5 Herndon, NE SE NW sec. 22-21-15. T.D. 1,565 ft.; blg. to tst.

LEGAL

Department of the Interior, U. S. Land Office, Las Cruces, New Mexico. Notice is hereby given that the W¼ and W½ SE¼ Sec. 15, T. 17 S., R. 32 E., N.M.P.M., 400 acres, Baish oil and gas field, New Mexico, is offered to the responsible qualified bidder of the highest bonus per acre for lease under Section 17 of the act of February 25, 1920 (41 Stat. 437) as amended by the act of August 21, 1935 (49 Stat. 674), at the royalty rate scale in the lease form shown in Circular 1386, at a sale to be held in the United States Land Office, Las Cruces, New Mexico, at ten oclock A.M., May 18, 1937. The minimum bid which will be accepted is $1.50 per acre The land will be offered as a single unit. The successful bidder must deposit on the date of sale a certified check on a solvent bank, or cash, for one-fifth of the amount and file the showing of qualifications to receive a lease required by Section 7 of Circular 1386. The remainder of the bonus bid and the annual rental at the rate of $1.00 per acre must be paid prior to the issuance of the lease. The bidders are warned against violation of the provisions of Section 59 of the United States Criminal Code, approved March 4, 1909, prohibiting unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids at the discretion of the Secretary of the Interior. Register.

W. J. Hunter et al No. 1 Stoer, NW SW NE sec. 10-15-15. Drlg. 4,130 ft.

F. L. Luckett No. 1 Connell, SW NE sec. 10-20-15. 6-in. cmtd. 2,174 ft.; T.D. 2,203 ft.; prep. to test.

Tom Pappas No. 2 Spell, SW sec. 28-21-15. Drlg.

H. E. Philp No. 1 Fuller, NE cor. sec. 26-22-15. T.D. 1,034 ft.; W.O.

W. L. Porter No. 1 Terbune, sec. 15-21-16. Drlg. 784 ft.

Prairie River Synd. No. 1 Hutchinson, SW NW sec. 15-15-12. Drlg. 7,637 ft.

Rodgers et al No. 1 Thompson, NW SW SW sec. 11-20-15. Cmtd. 2,204 ft.; W.O.C.S.

Shreveport Oil Corp. No. 2-D Munslow, SE sec. 5-20-15. Drlg. 1,648 ft.

Simplex O. & G. Co. No. 11 Youree, NE SW sec. 7-20-14. 7-in. cmtd. 1,883 ft.; T.D. 1,893 ft.

P. A. Singlust No. 2 Starr-Brown, SE sec. 28-20-16. Cg. S.W. sd.; T.D. 1,820 ft.; W.O.

Stanolind O. & G. Co. No. 121 Dillon, NE SE sec. 14-21-15. 6-in. cmtd. 1,474 ft.; T.D. 1,490 ft.; W.O.C.S.

Stanolind O. & G. No. 11 J. B. Slattery, NE NW sec. 27-21-15. Comp.; pmp. 20 B.P.D.; T.D. 1,580 ft.

J. J. Thompson No. 1 Gamm, NE SW NW sec. 35-21-15. Tstg. S.W.; S.D.; T.D. 2,225 ft.

Caldwell Parish

Critchett & Woods No. 2 So. Craft, SE NW NE sec. 18-11-3e. T.D. 1,710 ft.; D.&A.

Claiborne Parish

J. B. Bond No. 1 H. E. Patton, E½ NW NW sec. 36-21-5. Drlg. 150 ft.

Gulf Ref. No. 1 Eva Bennett, SW sec. 31-21-4. Drlg. 5,296 ft.

Gulf Ref. No. 1 H. E. Patton, SE sec. 36-21-5. Drlg. 5,330 ft.

Gulf Ref. No. 2 H. E. Patton, 1,650 ft. N and W, SE cor. sec. 36-21-5. Drlg. 5,311 ft.

Gulf Ref. No. 3 H. E. Patton, SW NE SW sec. 36-21-5. Drlg. 4,900 ft.

Gulf Ref. No. 4 H. E. Patton, NW NE SW sec. 36-21-5. Drlg. 4,590 ft.

T. L. James No. 1 Patton Est., C N½ NE SE sec. 36-21-5. Drlg. 4,770 ft.

T. L. James No. 2 Patton Est., SW NE SW sec. 36-21-5. Drlg. 5,323 ft.

Love Pet. No. No. 1 H. E. Patton, SE SW SE sec. 36-21-5. 7-in. cmtd. 5,323 ft; T.D. 5,350 ft.; W.O.C.S.

Love Pet. Co. No. 3 H. E. Patton, NE SW SE sec. 36-21-5. Drlg. 5,090 ft.

Lyons & Neely No. 1 Maggie Patton, C W½ NW SW sec. 31-21-4. Drlg. 5,250 ft.

Lyons & Neely No. 2 Maggie Patton, E½ NW SW sec. 31-24-4. Drlg.

Magnolia Pet. No. 1 H. E. Patton, NW SE SW sec. 36-21-5. M.I.M.

McMillan et al No. 1-A Maggie Patton, S½ NE SW sec. 31-24-4. 7-in. cmtd. 5,220 ft. T.D. 5,293 ft.; W.O.C.S.

L. O. McMillan No. 1 H. E. Patton, S½ SW NW sec. 36-21-5. Drlg. 5,244 ft.

L. O. McMillan No. 1 Robert Vaughn, S½ NW NE sec. 36-21-5. Drlg. 4,580 ft.

E. T. Oakes No. 1 M. S. Patton, NE NW NE sec. 1-20-5. Drk.

Ray P. Oden No. 2 H. W. Patton, NW SE SE sec. 36-21-5. Drlg. 3,540 ft.

Shreveport Oil Corp. No. 1 Edwards, NE sec. 16-20-5w. 13-in. cmtd. 52 ft.

Standard Oil of La. No. 1 Baker, 660 S&E NW sec. 27-19n-7w. Drlg. 6,783 ft.

J. C. Tippett No. 1 H. E. Patton, 330 ft. N and E, SW SE sec. 36-21-5. Drlg. 2,186 ft.

United Gas No. 1 W. M. Dobbins, sec. 12-19-6w. O.W.D.D.; 5-in. cmtd. 5,660 ft.; T.D. 5,776 ft.; W.O.C.S.

P. W. Woodruff No. 1-B McDonald, N½ SE NE sec. 36-21-5. Drk.

P. W. Woodruff No. 2 H. E. Patton, C N½ SW NE sec. 31-24-4. Drlg. 5,090 ft.

De Soto Parish

Benedum & Trees No. 1 Clifton, NE NW sec. 33-13-12. Drlg. 5,020 ft.

Chamberlin et al No. 1 Lainer, SW NE sec. 29-11-11. R.U.

Grogan Oil Co. No. 1 Ramsey, sec. 36-11-11. Junked and abd.; T.D. 3,027 ft.

Rio Rajo Oil Co. No. 7 Prudhomme, SE cor. sec. 20-12-11. T.D. 2,742 ft.; tstg.; show oil and S.W.

Stillers et al No. 2 Jenkins, 330 ft. S and W, NE SE NW sec. 35-13-12. S.D. 2,503 ft.; fuel.

Vaughn Prod. Co. No. 1 Sample, SW NE SE sec. 24-11-14. T.D. 5,930 ft.; D.&A.

Franklin Parish

Jensen & Bailey No. 1 Grayson, C NE sec. 36-12-6e. 10-in. cmtd. 220 ft.

Grant Parish

Burkett et al No. 1 Morrison, 156 ft. E and W, NW SW SW sec. 10-9-1e. Drlg. 50 ft.

H. M. S. Corp. No. 1 McNeely, sec. 21-6n-3w. 20-in. csg. 20 ft.

Harvey Weir No. 1 Calfax Bk. & Tr. Co., NE NW sec. 15-7n-3w. Drk.

Tri State Lse. & Dev. Co. No. 1 Edenborn Est., NE SE SE sec. 13-7-4w. T.D. 3,000 ft.; S.D.

Jackson Parish

G. W. Zeigen No. 5 La. Cen. Lbr. Co., sec. 13-14-2w. T.D. 2,812 ft. (cor.); S.D.

LaSalle Parish

Air Lift Oil Corp. No. 12 Urania, NE NW NE sec. 18-10-2e. Comp.; pmp. 60 B.P.D.; T.D. 1,508 ft.

T. & J. Oil Co. No. 1 Urania, NE NW SW sec. 19-10-2e. T.D. 1,598 ft.; D.&A.

Old Homestead O. & G. Co. No. 1 Z. Joria, SW SE NW sec. 23-9-1e. T.D. 1,280 ft.; S.D.

Urania O. & G. No. 1 Urania, NW sec. 7-10-2. T.D. 1,555 ft.; D.&A.

Lincoln Parish

Glassell & Glassell No. 1 Gray, SE sec. 16-20-3e. Drk.

Lyons & Neely No. 1 W. H. Patton, N½ NW NW sec. 6-20-4. Drlg. 1,100 ft.

E. T. Oakes-H. D. Easton and Evans No. 1 R. L. Sanderson, NW SE NW sec. 36-18-1w. Drk.

Morehouse Parish

So. Carbon Co. No. 3 Miles, NE sec. 36-21-4e. Tstg. S.G.; T.D. 2,402 ft.; S.D.; W.O.

Natchitoches Parish

Roy Raines No. 1 Allen, NW NE SW sec. 22-10-9w. 12-in. cmtd. 70 ft.

Red River Parish

Gulf No. 27 Kennedy, SW sec. 24-13-11. Drlg. 375 ft.

Gulf No. 40 E. T. Robinsons, SW sec. 24-13-11. Drlg. 2,505 ft.

Perla Oil Co. No. 1 DeLong, 330 ft. S and E. C sec. 23-12-10. Jnkd. and skidded rig; drlg. 1,016 ft.; arg. tst.

J. D. Wadley No. 1 McClelland, SE NE sec. 24-13-11. Drlg. 910 ft.

Sabine Parish

Earl F. Fox No. 1 Blankenship, NE SE NW sec. 13-9-12. T.D. 3,412 ft.; 2,000,000 ft. gas; tstg.

Odell Henson No. 11 Long Bell, SE NE NW sec. 5-8-13. S.D. 40 ft.

Kirk-Green-Way Inc. No. 1 Whitney Corp., NW NE sec. 8-9-13. 9-in. cmtd. 5,176 ft.; T.D. 5,180 ft.; W.O.C.S.

Producers O. & G. Co. No. 5 Edwards Est., SW NW SW sec. 29-9-13. Drk.

Prod. O. & G. Co. No. 1 Lynch, SW NE SW sec. 29-9-13. Pumped off; acid; T.D. 1,608 ft.

W. G. Ray Drlg. Co. No. 3 Looney, NW SE NE sec. 30-9-13. T.D. 2,111 ft.; D. &A.

A. C. Scott No. 1 Bowman-Hicks Lbr. Co., sec. 23-9-13. O.W.D.D.; T.D. 3,070 ft.; W.O.

Willis & Dowden No. 1 Lynch, SW NE SW sec. 29-9-13. T.D. 1,608 ft.; arg. tst.

Tensas Parish

Ark. La. Gas Co. No. 1 Baker, NE NW NE sec. 7-11-10. Drld. as core test; T.D. 470 ft.; blew out and est. 7,000,000 ft. gas; S.D.; W.O.

H. M. Jones et al No. 1 Chicago Mill & Lbr. Co., NE sec. 30-12n-10e. T.D. 798 ft.; blew out after stng. 8 mo.; gauging 30,000,000 ft. gas and 10,000 bbls. wtr.; drld. out bridge and well blew out again and bridged over; T.D. 798 ft.; W.O.; T.D. 798 ft.; blew out again and bridged.

Webster Parish

W. H. Bass Drlg. Co. No. 1 T. Crichton, C NW NW sec. 21-20-9. Drlg. 4,685 ft.

Magnolia No. 2 D. G. Cox, SW SE NE sec. 22-21-10. Drlg. 5,160 ft.

Magnolia Pet. Co. No. 2 A. J. McCook, SW sec. 22-21-10. Drk.

Ohio Oil Co. No. 1 S. P. D. Coyle, NW SE SW sec. 23-21-10. Drlg. 7,232 ft.

Ohio Oil Co. No 2 R. M. Coyle, SE sec. 22-21-10. Drlg. 6,740 ft.

Ohio No. 1 S. P. D. Coyle and W. Cox, SW SW SE sec. 23-21-10. Drk.

Ohio Oil No. 1 T. Crichton, Acct. No. 2, SE NE sec. 21-21-10. Drk.

Ohio Oil No. 1 L. M. Gardner, NE sec. 22-21-10. Drlg. 4,168 ft.

Ohio Oil Co. No. 2 A. H. Gray Acct. No. 2, NW sec. 26-21-10. Drlg. 7,523 ft.

Ohio Oil Co. No. 2 A. J. Hodges, NE NW SW sec. 23-21-10. Drlg. 7,506 ft.

Ohio No. 7-B R. L. Holloway, 586 ft. N, 756 ft. E line, sec. 23-21-10. Drk.

L. R. Skidmore No. 1 Barnett, NE NW SW sec. 29-17-9. T.D. 3,785 ft.; S.D.

Standard Oil Co. of La. No. 1 E. Firdecker, 1,320 ft. E, 1,316 ft. S, SW cor. sec. 2-17n-9w. Comp.; flw. 31,000,000 ft. gas; T.D. 7,202 ft.

Standard Oil of La. No. 1 E. L. Stewart, SE SE SE sec. 32-21-10. Drlg. 3,012 ft.

Woodley Pet. Co. No. 4-B Gray, NE NE sec. 27-21-10. Drlg. 7,495 ft.

SOUTH LOUISIANA FIELDS

Ansela Butte—St. Martin Parish

Y. D. Spell No. 3 Begnaud, sec. 117-9s-5e. Cg. sd. 1,385 ft.

Bayou Coeotriz—Terrebonne Parish

Shell Pet. Corp. No. 1 Pelican, sec. 35-17s-15e. Drlg. sh. 7,070 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 37 Watkins, sec. 8-12s-12w. T.D. 4,648 ft.; salt.

Caillou Island—Terrebonne Parish

Texas Co. No. 1 Caillou Island, sec. 18-23s-20e. Loc.

Texas Co. No. 1 L.L.&E., sec. 18-23s-20e. Drk.

Texas Co. No. 3 State, sec. 19-23s-20e. Drlg. sh. 6,200 ft.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 3 Laws Realty Co., sec. 25-12s-9e. Cg. 8,252 ft.

Pan American Ref. Co. No. 4 Laws Realty Co., sec. 30-13s-10e. Drk.

Pan American Prod. Co. No. 1 South Coast Corp., sec. 30-13s-10e. T.D. 7,923 ft.; rec. 1,000 ft. of P.L.O. on D.S.T. 7,906-23 ft.; 7-in. csg. 7,906 ft.

Choctaw—Iberville Parish

Standard Oil Co. No. 9 Myrtle Grove, sec. 53-9s-11e. T.D. 3,455 ft.; P.B. 3,160 ft.; to sdtrk.; drlg. sdy. sh. 2,762 ft.

Cameron Meadows—Cameron Parish

Burton Sutton Oil Co. No. 18 School Ld., sec. 16-14s-13w. Drlg. sh. 2,479 ft.

Magnolia Pet. Co. No. 19 Cameron Meadows, sec. 16-14s-13w. Drlg. sh. 5,230 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 15 Community, sec. 29-10s-2w. Drlg. sh. 5,262 ft.

Humble O. & R. Co. No. 1 V. E. Landry, sec. 34-10s-2e. Drk.

Dog Lake—Terrebonne Parish

Texas Co. No. 5 State, sec. 5-22s-16e. 10¾-in. csg. 1,505 ft.; drlg. sd. 5,948 ft.

Fausse Point—Iberia Parish

Texas Co. No. 3 State, sec. 35-11s-8e. Drk.

Garden Island—Plaquemines Parish

Texas Co. No. 21 State, sec. 37-23s-33e. Drlg. sh. 522 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 3 Airhart, sec. 14-9s-8w. Drk.

Fohs Oil Co. No. 1 First Natl. Bank, sec. 13-9s-8w. T.D. 7,158 ft.; P.B. to 6,980 ft.; sdtrkd.; drld. to 7,046 ft.; recvd. 400 ft. of P.L.O. on D.S.T.

Union Sulphur Co. No. 14 Barbe, sec. 1-9s-8w. T.D. 6,738 ft.; 7-in. csg. 6,723 ft.; swbd. oil and S.W.

Union Sulphur Co. No. 15 Barbe, sec. 1-9s-8w. T.D. 1,527 ft.; W.O.C.

Union Sulphur Co. No. 7 Castle, sec. 14-9s-8w. Drlg. sh. and L. 6,227 ft.

Union Sulphur Co. No. 6 Mayo-Reeves, sec. 12-9s-8w. R.U.

Union Sulphur Co. No. 12 Powell Lbr. Co., sec. 12-9s-8w. 10¾-in. csg. 1,601 ft.; T.D. 6,714 ft.; I.P. 400 B.P.D.; 20/64-in. ck.

Hackberry—Cameron Parish

Burton-Sutton Oil Co. No. 1-A Duhon, sec. 22-12s-10w. Drlg. sh. 2,901 ft.

W. T. Burton No. 1 Kennedy, sec. 22-12s-10w. Drlg. sh. 4,398 ft.

W. T. Burton No. 2 R. Vincent, sec. 22-12s-10w. Drk.

W. T. Burton No. 1 J. J. Roboria, sec. 11-9s-2w. R.U.

Gulf Oil Corp. No. 23 Erwin, sec. 12-12s-10w. T.D. 5,505 ft.; tstd. mud and S.W. on D.S.T.

Independent Oil Co. No. 1 Sanner, sec. 29-12s-10w. T.D. 1,775 ft.; 5-in. csg. 1,775 ft.; swbd. S.W.; S.D.

Stanolind O. & G. Co. No. 1 J. H. Duhon, sec. 27-12s-10w. Old T.D. 4,627 ft.; drlg. sdtrkd. hole sh. 5,203 ft.

Stanolind O. & G. Co. No. 25-B Gulf Land fee, sec. 15-12s-10w. 20-in. csg. 158 ft.; drlg. sh. and L. 5,708 ft.

Stanolind O. & G. Co. No. 1 Little, sec. 28-12s-10w. Run 109 ft. 16-in. csg.; drlg. sh. 3,440 ft.

Stanolind O. & G. Co. No. 18 School Land, sec. 16-12s-10w. T.D. 5,996 ft.; P.B. and sdtrkd.; T.D. 5,926 ft.; 7-in. csg. 5,912 ft. I.P. 565 B.P.D.; ⅝-in. ck.

Texas Co. No. 21 State, sec. 12-12s-9w. 10¾-in. csg. 2,126 ft.; drlg. L. 7,399 ft.

Iowa—Jefferson Davis Parish

Shell Pet. Corp. No. 23 Heyd, sec. 13-9s-7w. 5-in. csg. 4,390 ft.; T.D. 4,424 ft.; fsg.

Shell Pet. Corp. No. 24 Heyd, sec. 13-9s-7w. Loc.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Banta, sec. 40-13s-9e. Drlg. sh. 6,670 ft.

Herton Oil Co. No. 8 Banta, sec. 40-13s-9e. Drlg. sh. 5,160 ft.

Herton Oil Co. No. 6 Carter, sec. 38-13s-9e. Drlg. sh. 5,474 ft.

Jennings—Acadia Parish

W. T. Burton No. 1 Robira, sec. 41-9s-2w. Drlg. sdy. sh. 5,943 ft.

Alfred Glassell No. 1 R. McFarlain, sec. 41-9s-2w. R.U.

Lake City Oil Co. No. 2 Jennings Synd., sec. 46-9s-2w. T.D. 4,248 ft.; 7-in. csg. 4,248 ft.; perf. csg.

T. C. Markly No. 1 Gourney, sec. 42-9s-2w. Old T.D. 4,280 ft.; skidded drk.; S.D.; salt 5,049 ft.; abd.

S. Rhoden et al No. 1 Iowa-Jennings, sec. 45-9s-2w. T.D. 3,916 ft.; run 6⅝-in. csg. rec. P.L.O. on D.S.T.; run screen.

Stanolind O. & G. Co. No. 18 Houssiere-Latrielle, sec. 47-9s-2w. 8⅝-in. csg. 5,358 ft.; T.D. 7,072 ft.; 6⅝-in. csg. 7,005 ft.; flwg. dry gas; tstg.

Superior Oil Prod. Co. No. 2 Eunice-Crowley, sec. 12-9s-2w. T.D. 4,549 ft.; salt; 7-in. csg. 3,776 ft.; attempted D.S.T.

Superior Oil Prod. Co. No. 2 Iowa-Jennings, sec. 41. Drk.

Superior Oil Prod. Co. No. 2 Jennings-Heywood, sec. 41-9s-2w. 11¾-in. csg. 1,465 ft.; drlg. sd. 6,279 ft.

Superior Oil Prod. Co. No. 3 Jennings, sec. 42-9s-2w. Drlg. sh. 4,665 ft.

Superior Oil Prod. Co. No. 3 Wm. Lecklet. Drlg. sdy. sh. 4,932 ft.

Superior Oil Prod. Co. No. 4 Lecklet, sec. 42-9s-2w. Drlg. sd. and sh. 3,667 ft.

Lafitte—Jefferson Parish

Texas Co. No. 6 Lafitte, sec. 20-17s-24e. Drlg. sd. 10,386 ft.

Texas Co. No. 2 Milling, sec. 20-17s-24e. Dredging canal.

Texas Co. No. 7 Rigolet, sec. 29-17s-24e. Drlg. sdy. L. 7,003 ft.

Texas Co. No. 1 State-Bayou Norman, sec. 28-17s-24e. Drlg. sh. 7,466 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre-State, T.D. 10,959 ft.; D.S. stuck; shot at 8,113 ft.; P.B. and sdtrkd.; drlg. salt 3,008 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 15 State, sec. 17-23s-18e. Drlg. sd. 6,427 ft.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 6 Lafourche, sec. 11-8s-25e. T.D. 6,390 ft.; perf. csg. 6,371-77 ft.; showed S.W. and gas; abd.

Leesville—Lafourche Parish

Gulf Oil Corp. No. 1-A City of New Orleans, sec. 35-21s-22e. Drlg. sd. 6,103 ft.
Texas Co. No. 59 L.L.&E., sec. 27-21s-27e. Cd. sd. 4,715 ft.
Texas Co. No. 61 Leesville, sec. 27-21s-22e. T.D. 3,905 ft.; 7⅝-in. csg. 3,861 ft.; W.O.C.

Lockport—Cameron Parish

Magnolia Pet. Co. No. 6 Freeberg, sec. 9-10s-9w. Drlg. sh. 5,350 ft.

New Iberia—Iberia Parish

Wm. Hellis No. 8 Bernard, sec. 54-12s-7e. Drlg. sh. and L. 4,102 ft.
Wm. Hellis No. 4 Bullock & Burke, sec. 25-12s-7e. T.D. 4,505 ft.; P.B. and sdtrk.; T.D. 4,401 ft.; P.B. and sdtrkd.; T.D 4,548 ft.; 7-in. csg. 3,722 ft.; swbg. 300 bbls. daily.
Wm. Hellis No. 3 Schwing, sec. 57-12s-7e. S.D. 4,962 ft.; salt.
Texas Co. No. 2 Duhe, sec. 26-12s-7e. Drlg. sd. and sh. 4,217 ft.
Texas Co. No. 3 Bryant, sec. 25-12s-7e. R.U.
Texas Co. No. 5-B Hanzen, sec. 54-12s-7e. T.D. 4,736 ft.; 7⅝-in. csg. 4,678 ft.; I.P. 1,189 B.P.D.; ⅜-in. ck.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 2 Watkins, sec. 4-6s-5e. Drlg. sh. 1,278 ft.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 8-B Devilbiss, sec. 11-9s-4w. T.D. 8,840 ft.; W.O.C.

Sorrento—Ascension Parish

Sorrento Oil Co. No. 1 Bernard, sec. 9-19s-14e. T.D. 6,708 ft.
Kira Oil Co. No. 1 Duplessis, sec. 69-10s-2e. R.U.

South Jennings—Jeff Davis Parish

Stanolind-Amerada Pet. Corp. No. 2 Calcasieu Natl. Bank, sec. 10-10s-3w. R.U.

Starks—Calcasieu Parish

J. R. Turnbull No. 1 Industrial Lbr. Co. sec. 20-9s-12w. S.D. 6,433 ft.

St. Martinsville—St. Martin Parish

Tide Water Oil Co. No. 1-B Smedes, sec. 57-11s-6e. Drlg. sh. 3,189 ft.
Tide Water Oil Co. No. 3 Smedes, sec. 57-11s-6e. Cg. sd. 5,382 ft.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 840 fee, sec. 29-9s-10w. T.D. 3,740 ft.; P.B. 3,316 ft.; R.U. to pmp.; no report.
Union Sulphur Co. No. 842 fee, sec. 29-9s-10w. T.D. 5,475 ft.; P.B. and sdtrkd.; S.D. 5,286 ft.; no report.
Union Sulphur Co. No. 844 fee, sec. 29-9s-10w. Core 5,182 ft.; no report.

Tepetate—Acadia Parish

Continental Oil Co. No. 2-D Homeseekers Dev. Co., sec. 29-7s-2w. T.D. 8,322 ft.; tstg.
Continental Oil Co. No. 4 P. W. Miller, sec. 28-7s-2w. Drlg. sh. 3,900 ft.
Continental Oil Co. No. 1 Vincent and Welch, sec. 30-7s-2w. Spdd.

Valentine—Lafourche Parish

Pan American Prod. Co. No. 3 Harang, sec. 8-17s-20e. T.D. 7,718 ft.; D.P. stuck. P.B. 5,154 ft.; to sdtrk.
Pan American Prod. Co. No. 4 Harang sec. 8-17s-20e. T.D. 7,190 ft.; 7-in. csg 7,120 ft.; W.O.C.
Pan American Prod. Co. No. 5 Harang, sec. 8-17s-20e. 16-in. csg. 235 ft.; drlg. sh. 4,760 ft.

Vinton—Calcasieu Parish

Woodley Pet. Co. No. 1 Gray, sec. 32-10s-12e. Drlg. sh. 1,726 ft.

White Castle—Calcasieu Parish

Shell Pet. Corp. No. 4 Shingle, sec. 12-11s-12e. T.D. 8,903 ft.; P.B. 8,717 ft.; milling out of csg. at 8,027 ft.; set whipstock.

LEGAL

Department of the Interior, U. S. Land Office, Las Cruces, New Mexico. Notice is hereby given that the W½ W½ Sec. 24, W½ NW¼, SE¼ NW¼ Sec. 25, T. 26 S., R. 36 E., N.M.P.M., 280 acres, in the Eaves oil and gas field, New Mexico, is offered to the responsible qualified bidder of the highest bonus per acre for lease under Section 17 of the act of February 25, 1920 (41 Stat., 437), as amended by the act of August 21, 1935 (49 Stat. 674), at the royalty rate scale in the lease form shown in Circular 1386, at a sale to be held in the United States Land Office, Las Cruces, New Mexico, at 10 o'Clock, A.M., May 18, 1937. The minimum bid which will be accepted is $1.00 per acre. The land will be offered as a single unit. The successful bidder must deposit on the date of the sale a certified check on a solvent bank, or cash, for one-fifth of the amount and file the showing of qualifications to receive a lease required by Section 7 of Circular 1386. The remainder of the bonus bid and the annual rental at the rate of $1.00 per acre must be paid prior to the issuance of the lease. The bidders are warned against violation of the provisions of Section 59 of the United States Criminal Code approved March 4, 1909, prohibiting unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids at the discretion of the Secretary of the Interior. Register.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. T.D. 5,426 ft.; left 900 ft. of D.S. in hole.
Humble O. & R. Co. No. 1 Floyd Williams, sec. 34-8s-1e. Drlg. 225 ft.

Allen Parish

Humble O. & R. Co. No. 3 Bel, located in cratered hole, sec. 26-6s-7w. 10¾-in. csg. 165 ft.; T.D. 2,870 ft.; 7-in. csg. 2,766 ft.; shot well; failed to stop flwg. S.W.; S.D.

Avoyelles Parish

Coastal Minerals No. 1 Purdy-Hess, sec. 25-2n-3e. Drk.; S.D.; high wtr.
George Conover No. 1 Purdy-Hess, sec. 36-2n-3e. Drk.
Frost Oil Co. No. 1 Hines Lumber Co., sec. 3-3n-4e. Drk.

Calcasieu Parish

D. D. Oil Co. No. 1 Lutcher Moore, sec 11-8s-13w. T.D. 8,447 ft.; D.S. stuck; fsg. hole cleaned to 6,500 ft.

Cameron Parish

Magnolia Pet. Co. No. 1-A Dobbortine, sec. 9-15s-14w. 8⅝-in. csg. 617 ft.; drlg. sh. and L. 8,166 ft.
Southern Sulphur Co. No. 2 State, sec. 29-15s-10w. S.D. 2,611 ft.
Union Sulphur Co. No. 1 J. O. Hebert, sec. 18-12s-8w. Drlg. sh. 7,890 ft.

Cameron Parish—Gulf of Mexico

Superior Oil Prod. Co. et al No. 1 State-Gulf of Mexico, 3,800 ft. W, 6,200 ft. S of SE cor. of irregular sec. 4-15s-8w. Loc.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Elliott, sec. 3-9s-2e. R.U.
Cavalier Oil Co. No. 1 E. B. Young, sec. 52-4e-1w. Drlg. 3,010 ft.

Evangeline Parish

Belle Chenney Springs Oil Co. No. 1 Belle Springs Land Dev. Co., sec. 10-2s-1w. S.D. 1,400 ft.
Continental Oil Co. No. 1 Pardee Lbr. Co., sec. 18-4s-1w. Drlg. sh. 8,547 ft.

Iberia Parish

Jefferson Lake Oil Co. No. 414 State Lake Pigneur, Twp. 12s-5e. Top salt 990 ft.; set 10¾-in. csg. 5,095 ft.; top oil sd. 6,915 ft.; 7-in. csg. 6,930 ft.; cd. salt 7,059-60 ft.; P.B. 5,500 ft.

Jefferson Parish

Louisiana Crusader Oil Corp. No. 1 Langley, sec. 36-7s-5w. Drlg. sdy. sh. 7,038 ft.
Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. T.D. 2,461 ft.; rebldg. drk.

Jefferson Davis Parish

Stanolind O. & G. Co. No. 2-B Calcasieu Natl. Bank, sec. 28-7s-3w. R.U.
Stanolind O. & G. Co. No. 1 United Life Accident Co., sec. 16-11s-5w. 13⅜-in. csg. 2,142 ft.; T.D. 9,942 ft.; abd.

Lafourche Parish

Gulf Oil Corp. No. 3 State, sec. 36-23s-21e. Drk.
Fohs Oil Co. No. 1 State Lake, sec. 65-17s-19e. Drlg. wtr. sd. 7,981 ft.
Wm. Hellis No. 1 City of New Orleans, sec. 19-23s-23e. T.D. 7,607 ft.; 7-in. csg. on bttm.; S.D.

Livingston Parish

Coastline Oil Co. No. 1 Addison Trust Co., sec. 7-7s-3e. Drk.

Plaquemines Parish

Gulf Oil Corp. No. 1 Bay-Adams sec. 32-52s-19. Drlg. sd. 4,367 ft.
Tide Water Oil Co. No. 3 Manhattan Fruit Co., sec. 26-21s-30e. Dredging canal.

Rapides Parish

C. L. Decker No. 1 Lee Lbr. Co., sec. 21-5n-3e. Drk.
R. D. Webb No. 1 A. M. Brasher, sec. 22-4n-2w. Fsg. 5,236 ft.

St. Bernard Parish

Gulf Oil Corp. No. 1 Lake Lery, sec. 28-14s-14e. Drlg. sd. and sh. 6,104 ft.
Southern Sulphur Co. No. 2 State Lake Borgne, sec. 38-14s-15e. 13⅜-in. csg. 303 ft.; S.D. 3,170 ft.

St. Charles Parish

Amerada Pet. Corp. and La. Ld. & Expl. Co. No. 1 State, sec. 13-15s-20e. Drlg. sh. 1,491 ft.

St. Landry Parish

Gulf Oil Corp. No. 1 Haas & Hirsch, sec. 12-6s-7e. Bldg. road.
Shell Pet. Corp. No. 1 Boagni, sec. 48-8s-4e. 10¾-in. csg. 2,521 ft.; cg. sh. 7,603 ft.

St. Martin Parish

Geo. E. Lilly et al No. 1 Martin, sec. 32-9s-7e. T.D. 996 ft.; pulled in drk.
Texas Co. No. 9 St. Martin, sec. 21-8s-7e. 18⅝-in. csg. 106 ft.; top salt 8,848 ft.; T.D. 8,858 ft.; drlg. plug.
Texas Co. No. 3 State, sec. 14-10s-9e. 18-in. csg. 101 ft.; drlg. sh. 7,777 ft.

St. Mary Parish

Texas Co. No. 1 Horse Shoe Bayou, sec. 40-17s-9e. T.D. 10,975 ft.; 7⅝-in. csg. cmtd. on bttm.; S.D. 11,769 ft.
Texas Co. No. 1 State-Bateman Lake, sec. 21-16s-12e. T.D. 8,953 ft.; reset barge.

Terrebonne Parish

Humble O. & R. Co. No. 1 H. J. Ellender, sec. 23-19s-19e. 9⅝-in. csg. 8,735 ft.; T.D. 12,165 ft.; 7-in. csg. 12,101 ft.

TEXAS

Week Ending May 1

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 11-B Hardy, J. E. Groce Sur. Drlg. sh. 4,166 ft.
Humble O. & R. Co. No. 21-X R. G. Paine, W. C. White Sur. T.D. 4,110 ft.; tstg.

Hastings—Brazoria County

A. W. Crosby No. 1 J. H. Ross, S. McKissick Sur. Cg. 5,950 ft.
W. L. Goldston et al No. 2 Thomas-Ross, S. McKissick Sur. R.U.
Humble O. & R. Co. No. 3-B Brown, Perry & Austin Sur. T.D. 6,080 ft.; I.P. 611 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 1 C. F. Crook, B.B.B.&C. Sur. Drlg. sd. and L. 4,320 ft.
Humble O. & R. Co. No. 2 L. C. King, H. T.&B. Sur. No. 29. Drlg. sh. 4,237 ft.
Humble O. & R. Co. No. 2 C. M. Moody, B.B.B.&C. Sur. Drlg. sh. and L. 2,081 ft.
Humble O. & R. Co. No. 1 Southwestern University, Wm. Henery Sur. T.D. 6,095 ft.; I.P. 149 B.P.D.; ¼-in. ck.
Navarro Oil Co. No. 1-B W. F. Beers, Perry and Austin Sur. Drlg. sh. and L. 3,912 ft.
Stanolind O. & G. Co. No. 3-A Avitts, H.T.&B. Sur. No. 29. 16-in. csg. 90 ft.; T.D. 6,080 ft.; 7-in. csg. 5,927 ft.; W.O.C.
Stanolind O. & G. Co. No. 2 Frank M. Berger, H.T.&B. Sur. No. 37. 10¾-in. csg. 1,657 ft.; T.D. 6,050 ft.; 7-in. csg. 5,799 ft.; I.P. 631 B.P.D.; ¼-in. ck.
Stanolind O. & G. Co. No. 3 C. H. Blount, B. T. Masterson Sur. T.D. 6,080 ft.; 7-in. csg. 6,000 ft.; I.P. 594 B.P.D.; ¼-in. ck.
Stanolind O. & G. Co. No. 4 Floyd Brown, H.T.&B. Sur. No. 29. Drk.
Stanolind O. & G. Co. No. 1 Mary Condon, H.T.&B. Sur. No. 29. Drk.
Stanolind O. & G. Co. No. 9 Drake, H.T.& B. Sur. No. 36. 16-in. csg. 90 ft.; Cd. sh. 6,157 ft.
Stanolind O. & G. Co. No. 11-B H. H. Ford, H.T.&B. Sur. No. 29. T.D. 1,664 ft.; W.O.C.
Stanolind O. & G. Co. No. 2 McKibben, Lot 16, H.T.&B. Sur. No. 29. 16-in. csg. 90 ft.; W.O.C.
Stanolind O. & G. Co. No. 2 A. C. McKibben, H.T.&B. Sur. No. 29. R.U.
Stanolind O. & G. Co. No. 1 Massey Condon, Lot 20, H.T.&B. Sur. No. 29. Drlg. sh. and shell 4,981 ft.
Stanolind O. & G. Co. No. 2 Condon, Lot 11, H.T.&B. Sur. T.D. 5,908 ft.; 7-in. csg. 5,663 ft.
Stanolind O. & G. Co. No. 3 Law, H.T.&B. Sur. No. 36. 16-in. csg. 90 ft.; T.D. 6,080 ft.; comp.; no gauge.
Stanolind O. & G. Co. No. 3 Steve Paul, A. C.H.&B. Sur. T.D. 6,080 ft.; 7-in. csg. 5,868 ft.
Stanolind O. & G. Co. No. 4 Steve Paul, A.C.H.&B. Sur. No. 2. Drlg. L. 3,945 ft.
Stanolind O. & G. Co. No. 5 Steve Paul, A.C.H.&B. Sur. Drk.

Lockridge—Brazoria County

Gulf Oil Corp. No. 1 Fred Reiss, J. W. Hall Sur. T.D. 8,164 ft.; rng. 7,000 ft. of 9⅝-in. csg.; P.B. to 2,400 ft.; sdtrkd.; 9⅝-in. csg. 5,000 ft.; T.D. 8,568 ft.; twisted off D.S.
Gulf Oil Corp. No. 2 Gibson, J. W. Hall Sur. R.U.
Gulf Oil Corp. No. 1-A G. L. Wood et al, Thomas Alsberry Sur. No. 4. Abst. No. 2. 13⅜-in. csg. 1,431 ft.; T.D. 6,386 ft.; 9⅝-in. csg. 6,374 ft.
Gulf Oil Corp. No. 3 Wilkes Smith, J. W. Hall Sur. Drlg. sh. 6,038 ft.
Shell Pet. Corp. No. 3 Ramsey State Farm, J. W. Hall Sur. No. 11. 10¾-in. csg. 1,390 ft.; cg. sh. 6,268 ft.

Manvel—Brazoria County

Allhands and Davis No. 1 Lambert, E. Little Sur. R.U.
Burton Drlg. Co. No. 2 Baldwin, E. Little Sur. Drlg. sh. 3,950 ft.
R. Olsen No. 2 Nichols, H. N. Little Sur. T.D. 4,100 ft.; W.O.C.
E. A. Stone No. 1 Nichols, E. Little Sur. Drk.
Texas Co. No. 16-A W. T. Belcher, H. N. Little Sur. 10¾-in. csg. 1,119 ft.
Texas Co. No. 25 Houston Oil Field Assn., A.C.H.&B. Sur. No. 91. Drlg. sh. and L. 2,273 ft.
Texas Co. No. 4 Lemmer, S. Spraggins Sur. Drlg. sd. and bldrs. 1,412 ft.

Old Ocean—Brazoria County

Harrison and Abercrombie No. 4 Bernard River Ld. and Development Co., Charles Breen Sur. 13⅜-in. csg. 1,405 ft.; 9⅝-in. csg. 7,005 ft.; W.O.C.

Sandy Point—Brazoria County

Bunte O. & G. Co. No. 1 A. A. Sharp, Chester S. Gorbot Sur. Drk.
Bunte O. & G. Co.-Florence Investment Co. No. 1 Fite. T.D. 5,680 ft.; fsg.
J. F. Driscoll No. 1 J. W. Fullet, Lavaca Navigation Sur. No. 3. Bldg. Drk.

Heyser—Calhoun—Victoria County

George Echols No. 4 Bennett, J. Galban Sur. Drlg. sh. 2,730 ft.
Humble O. & R. Co. and Plymouth Oil Co. No. 12-A P. H. Welder, A. Sisneros Sur. Drk.
Humble O. & R. Co. and Plymouth Oil Co. No. 13-A P. H. Welder, A. Sisneros Sur. Drk.
Humble O. & R. Co.-Plymouth Oil Co. No. 13-B P. H. Welder, A. Sisneros Sur. Drk.
Portilla Drlg. Co. No. 7 P. H. Welder, A. Sisneros Sur. Moving in.

Anahuac—Chambers County

Gulf Oil Corp. No. 9 Knowles, W. T. Knowles Sur., H.&T.C. Sur. No. 48. Drk.
Gulf Oil Corp. No. 2 Pommer, sec. 40, H. &T.C. Sur. R.U.
Gulf Oil Corp. No. 5 Wilcox, sec. 48, H. &T.C. Sur. T.D. 7,100 ft.; 7-in. csg. 7,047 ft.
Gulf Oil Corp. No. 6 Wilcox, sec. 48, H. &T.C. Sur. T.D. 7,090 ft.; 7-in. csg. 7,052 ft.; I.P. 693 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 12 Broussard, H.&T.C. Sur. No. 59. Drk.
Humble O. & R. Co. No. 1-B E. T. Drought, H.T.&C. Sur. No. 46. T.D. 1,075 ft.; W.O.C.
Humble O. & R. Co. No. 12 Gripon, H.& T.C. Sur. No. 51. Drk.
Humble O. & R. Co. No. 8 C. Johnson, sec. 48, H.&T.C. Sur. Drk.
Humble O. & R. Co. No. 10 Max Engles, sec. 50, H.&T.C. Sur. 9⅝-in. csg. 1,225 ft.; T.D. 7,114 ft.; I.P. 560 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 14 Tyrell, sec. 52, H.&T.C. Sur. T.D. 7,085 ft.; I.P. 682 bbls. P.D., ¼-in. ck.
Humble O. & R. Co. No. 15 W. C. Tyrell, H.&T.C. Sur. No. 52. Drk.
Humble O. & R. Co. No. 15 Tyrell, sec. 52, H.&T.C. Sur. Drlg. sh. 1,937 ft.
Humble O. & R. Co. No. 13-B White, J. McGahey Sur. Drk.
Humble O. & R. Co. No. 14-B White, J. McGahey Sur. Drlg. sh. 1,0[illegible]
Humble O. & R. Co. No. 16 White, J. McGahey Sur. T.D. 7,128 ft.; I.P. 429 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 7 Zappe, sec. 51, H.&T.C. Sur. Drlg. sh. 3,212 ft.

Cotton Lake—Chambers County

Salt Dome Oil Co. No. 1-D Lawrence, 932 ft. W of No. 1-C, S. Barrow Sur. T.D. 6,525 ft.; 7-in. csg. 6,525 ft.; I.P. 431 B.P.D.; ¼-in. ck.; T.P. 800 lbs.; C.P. 1,100 lbs.

Seabreeze—Chambers County

Sun Oil Co. No. 1-A Broussard-Hebert, T. &N.O. Sur. No. 127. 13⅜-in. csg. 1,366 ft.; drlg. sh. 7,336 ft.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 1 Silva-Shadrack, Burney Sur. 10¾-in. csg. 1,158 ft.; T.D. 6,614 ft.; oil sd.; run csg.

Big Creek—Fort Bend County

Barnett Pet. Corp. No. 2 J. H. P. Davis, B. Nickson Sur. Drlg. sh. 2,612 ft.
Gulf Oil Corp. No. 75 T. W. Davis, M.

Hoard Exploration Co.

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Young Sur. T.D. 3,135 ft.; to make D. S.T.

Blue Ridge—Fort Bend County

Telshaw-Reese and Echelson No. 1 Blakely, E. Drew Sur. R.U.
Texas Gulf Prod. Co. No. 16 Blakely, Lot 9, Blk. C. T.D. 4,605 ft.; P.B. 4,560 ft.; I.P. 503 B.P.D.; ¼-in. ck.

Boling—Fort Bend County

John Deering No. 1 J. M. Moore, Charles Bettner Sur. Drlg. sh. 5,268 ft.
Mack Hank Oil Co. No. 3-A J. R. Farmer, J. Scott Sur. Drlg. sh. 2,630 ft.
Mack Hank Oil Co. No. 5-C E. C. Farmer, J. Scott Sur. Drk.

Thompson—Fort Bend County

H. M. Naylor No. 11 Gehr, S. Kennedy Sur. R.U.

Orchard—Fort Bend County

Gulf Oil Corp. No. 52 Moore, James Frazier Sur. Drlg. sh. 2,013 ft.
Gulf Oil Corp. No. 49 J. M. Moore, Germain Immg. No. 8, 13⅜-in. csg 2,522 ft.; T.D. 7,428 ft.; perf. csg.; tstg.

High Island—Galveston County

Stanolind O. & G. Co. No. 1-B Cade, B. Denman Sur. Drlg. S.W. sd 6,612 ft.
Stanolind O. & G. Co. No. 61 Cade, N. Fitzsimmon Sur. Drlg. 5,430 ft.
Stanolind O. & G. Co. No. 15-A Smith, M. Dunman Sur. R.U.
Stanolind O. & G. Co. No. 62-A Cade, M. Fitzsimmons Sur. Drk.

Dickinson—Galveston County

Atlantic Ref. Co. No. 1 R. C. Roberts, P. G. Merritt Sur. T.D. 8,131 ft.; oil sd.; run csg.
Coast Pet. Corp. No. 6 Maco Stewart, W. K. Wilson Sur. T.D. 8,875 ft.; 7-in. csg. 8,834 ft.
Diadem Oil Corp. of Texas No. 2 W. J. Way, E. P. Epperson Sur. T.D. 8,198 ft.; 6⅝-in. csg. 8,191 ft.; perf. csg. 8,058-62 ft.; tstd. S.W.; cmtd. perf. csg.; W.O.C.
Diadem Oil Corp. of Texas No. 1 Pauline Frederick, Loc.
Humble O. & R. Co. No. 1 Kilgore, W. K. Wilson Sur. Drk.
Humble O. & R. Co. No. 15-A Maco Stewart, W. K. Wilson Sur. Drk.
Humble O. & R. Co. No. 19-A Maco Stewart, W. K. Wilson Sur. Drk.
Humble O. & R. Co. No. 8-B M. Stewart, W. Wilson Sur. Drk.
Humble O. & R. Co. No. 17-A Stewart, J. Sellers Sur. Drlg. sh. 9,040 ft.
Humble O. & R. Co. No. 18-A Stewart, W. K. Wilson Sur. T.D. 8,096 ft.; W.O.C.
Kenben Oil Co. No. 4 Maco Stewart, W. K. Wilson Sur. Drk.
W. E. McKinney et al No. 3-A Galveston-Houston Elec. R.R., W. K. Wilson Sur. Drlg. sh. 8,300 ft.
Pure Oil Co. No. 1-B Sealy Hutchins, P. G. Merritt Sur. Drlg. sh. 7,760 ft.
Sinclair Prairie Oil Co. No. 1 W. Weems, W. K. Wilson Sur. Loc.
Stanolind O. & G. Co. No. 2 Dameani, W. K. Wilson Sur. R.U.
Stanolind O. & G. Co. No. 7 State, 13⅜-in. csg. 2,013 ft.; T.D. 7,769 ft.; placed cmt. plug on drill pipe.
Turman Oil Co. and Maco Stewart No. 1 Stewart, W. K. Wilson Sur. R.U.

Greens Lake—Galveston County

Sun Oil Co. No. 8 Hughes, W. C. M. Baker Sur. T.D. 3,910 ft.; 7-in. csg. 3,890 ft.; tstd. S.W.; made squeeze job; W.O.C.

Batson—Hardin County

Bunte O. & G. Co. No. 1 Melhome, J. Melhome Sur. Drlg. sh. 1,630 ft.

Silsbee—Hardin County

Republic Prod. Co.-Houston Oil Co. No. 9 Brooks, G. W. Brooks Sur. T.D. 6,915 ft.; 7-in. csg. 6,906 ft.
Republic Prod. Co.-Houston Oil Co. No. 11 Brooks, G. W. Brooks Sur. 10¾-in. csg. 1,441 ft.; T.D. 6,964 ft.; P.B. 5,683 ft.; drld. into old hole; P.B. 5,400 ft.
Republic Prod. Co.-Houston Oil Co. No. 12 Brooks fee, G. W. Brooks Sur. T.D. 6,845 ft.; 7-in. csg. 6,824 ft.
Republic Prod. Co-Houston Oil Co. No. 14 Brooks, G. W. Brooks Sur. Bldg. drk.
Republic Prod. Co.-Houston Oil Co. No. 15 Brooks. Drk.

Sour Lake—Hardin County

Texas Co. No. 322 fee, S. Jackson Sur. T.D. 2,080 ft.; P.B. 2,076 ft.; perf. csg. 1,777-90 ft.; swbg.

Clinton—Harris County

Stanolind O. & G. Co. No. 1 D. A. Oates, C. Martinez Sur., Abst. 543; 9⅝-in. csg. 6,771 ft.; drlg. sdy. sh. 8,067 ft.; top gas sd. 8,063 ft.; T.D. 8,783 ft.; P.B. 8,673 ft.; pulling drill pipe.

Goose Creek—Harris County

Bob Foster No. 1 Esenhour, Wm. Scott Sur. Drlg. sh. 543 ft.
Sun Oil Co. No. 1 A. Smith, Wm. Scott Lower Lge. Drk.

Fairbanks—Harris County

Amerada Pet. Corp.-Stanolind O. & G. Co. No. 1 W. Jacobs, Blk. 1, sec. 2, W.C.R. R. Sur. 10¾-in. csg. 1,430 ft.; drlg. sh. 4,315 ft.

Humble—Harris County

Texas Co. No. 273 Landslide, Robt. Dunman Sur. Drk.

Pierce Junction—Harris County

Gulf Oil Corp. No. 42 Taylor, J. Hamilton Sur. Drk.

South Houston—Harris County

Stanolind O. & G. Co. No. 2 Dist. No. 8. Drlg. sh. 2,135 ft.
Stanolind O. & G. Co. No. 2, Dist. 9. 9⅝-in. csg. 1,407 ft.; drlg. sh. 3,508 ft.
Stanolind O. & G. Co. No. 2, District 21. 9⅝-in. csg. 1,438 ft.; drlg. sh. 3,074 ft.
Stanolind O. & G. No. No. 2 District 22. 9⅝-in. csg. 1,459 ft.; W.O.C.
Stanolind O. & G. Co. No. 2, Dist. No. 23. Drk.
Stanolind O. & G. Co. No. 2 C. P. Williams, H.T.&B. Sur. No. 6, Tr. 45. Drlg. sh. 2,520 ft.
Stanolind O. & G. Co. No. 1 Worley H.T. &B. Sur. No. 6. T.D. 4,894 ft.; 5¾-in. csg. 4,811 ft.

Tomball—Harris County

George Echols No. 1 J. W. Woods, J. Pruitt Sur. R.U.
Humble O. & R. Co. No. 1-B E. W. Handy, J. Pruitt Sur. Drlg. sh. 4,075 ft.
Humble O. & R. Co. No. 1-B Wm. Martens, S. Van Sicle Sur. Drlg. sh. 2,316 ft.
Humble O. & R. Co. No. 3 Martens, G. Lamb Sur. T.D. 5,575 ft.; abd.
Humble O. & R. Co. No. 1-B Murphy, J. Pruitt Sur. T.D. 5,579 ft.; P.B. 5,570 ft.; I.P. 90 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 2-B Price-Holderreth, C. M. Pillot Sur. Drlg. sh. 5,460 ft.
Humble O. & R. Co. No. 1 Tomball Townsite, Unit 12, Wm. Hurd Sur. T.D. 5,579 ft.; I.P. 540 B.P.D.; ¼-in. ck.
Kourev Drlg. Co. No. 2 Hillegeist, J. House Sur. S.D. 5,038 ft.
Texas Co. No. 2 Lewis, Sain Lewis Sur. Cd. sd. 5,550 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 1 Dishman, Unit 32, C. Williams Sur. R.U.
Humble O. & R. Co. No. 1-B Ephlin, Lot 18, Blk. D, C. Williams Sur. Drlg. sh. 3,830 ft.
Humble O. & R. Co. No. 2 T. H. Crook, C. Williams Sur. R.U.
Humble O. & R. Co. No. 1 T. W. Lawler, C. Williams Sur. Drlg. sh. 4,212 ft.
Humble O. & R. Co. No. 1-B M. I. Lefler, Unit 19, Blk. E, C. Williams Sur. T.D. 6,778 ft.; perf. csg. 6,774-77½ ft.; comp. for gas well.
Humble O. & R. Co. No. 2-B M. I. Lefler, Lot D, C. Williams Sur. Abd. 6,830 ft.
Humble O. & R. Co. No. 1 A. L. Nolan, Blk. E, C. Williams Sur. T.D. 6,780 ft.; I.P. 660 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 3 R. J. Peveto, C. Williams Sur. T.D. 1,485 ft.; W.O.C.
Humble O. & R. Co. No. 3 J. H. Phelan, C. Williams Sur. T.D. 6,780 ft.; I.P. 27 B.P.H.
Humble O. & R. Co. No. 3 Pinchback, C. Williams Sur. T.D. 6,778 ft.; oil sd.; set retainer; perf 6,765-69 ft.; flwd. 20 B. P.H.; ¼-in. ck.
Humble O. & R. Co. No. 1 G. Sims, C. Williams Sur. T.D. 6,780 ft.; 5½-in. csg. 6,776 ft.; I.P. 727 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 1 Wm. Wohlfert, C. Williams Sur. R.U.
Humble O. & R. Co. No. 1 W. M. Wohlfert, C. Williams Sur. Drlg. sh. 4,237 ft.
Glenn H. McCarthy No. 5 Longe, H. Williams Sur. T.D. 5,381 ft.; sd. S.O.
Normandie Oil Co. No. 1 R. J. Peveto, C. Williams Sur. Cg. 6,710 ft.
Peyton Bros. No. 1 Pansy Yount, A. Houston Sur. Drlg. sh. 4,737 ft.
Stanolind O. & G. Co. No. 1 J. W. Hall, H. Williams Sur. T.D. 6,103 ft.; perf. csg. 6,099-6,101 ft.; tstg.
Stanolind O. & G. Co. No. 1, McCormick Sur. 10¾-in. csg. 1,629 ft.; T.D. 1,632 ft.
Stanolind O. & G. Co. No. 2 Sargl, H. Williams Sur. 16-in. csg. 60 ft.; drlg. sdy. sh. 5,167 ft.
Stanolind O. & G. Co. No. 3 Sargl, H. Williams Sur. R.U.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2 M. E. Fitzhugh, Wm. McFaddin Sur. R.U.

Fannett—Jefferson County

Gulf Oil Corp. No. 1 Junker, W. A. Smith Sur. 9⅝-in. csg. 6,009 ft.; T.D. 6,612 ft.; I.P. 691 B.P.H.; ¼-in. ck.

LaBelle—Jefferson County

Sun Oil Co. No. 1 John Ward, 933 ft. S of No. 2 Broussard, Wm. Burton Sur. 18⅝-in. csg. 109 ft.; drlg. sh. 8,378 ft.

Nome—Jefferson County

Shell Pet. Corp. No. 5 Carpenter, M. Peveto Sur. T.D. 6,145 ft.; tstd. S.W. on D.S.T.; 5-in. csg. 6,075 ft.; P.B. 6,047 ft.; perf. csg.; T.A.
Shell Pet. Corp. No. 1 Texas Public Service Co., W. H. Aldridge Sur. T.D. 6,050 ft.; I.P. 418 B.P.D.; ¼-in. ck.
Shell Pet. Corp. No. 1 Unit "B," M. E. Peveto Sur. Drk.
Sun Oil Co. No. 4 Hugh Longe, J. Blair Sur. Drlg. sh. 3,491 ft.
Sun Oil Co. No. 1 A. J. Mouboules, J. Blair Sur. 10¾-in. csg. 1,062 ft.; T.D. 8,768 ft.; P.B. 8,175 ft.; tstd. S.W.; P.B. and sdtrkd.; drlg. 3,200 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 17-C Kirby, J. Pleasants Sur. Drlg. sh. 5,617 ft.

Ganado—Jackson County

Texas Co. No. 1 Hultquest, D. Dempsey Sur. R.U.

Hankamer—Liberty County

Gulf Oil Corp. No. 2-A Weiser, George Stengler Sur. T.D. 5,225 ft.; comp. for gas well through perf. csg. 3,380-90 ft.

Hull—Liberty County

Bishop Oil Co. No. 1 C. R. Wilson, J. DeVore Sur. Oil sd. 780-88 ft.; drlg. sh. 2,630 ft.
D.&L. Production Co. No. 4 Mecon and Layton, J. DeVore Sur. T.D. 4,955 ft.; set screen; tstg.
Eclipse Oil Co. No. 1 Barrow. T.D. 5,014 ft.; S.D.
Gulf Oil Corp. No. 23 Baldwin, J. Devore League Sur. Oil sd. 4,975-5,014 ft.; T.D. 5,016 ft.
Hamil and Smith No. 1 Barngrover, J. DeVore Sur. Drlg. sh. and L. 4,105 ft.; no report.
Republic Prod. Co. No. 162 Dolbear, J. DeVore Sur. Drlg. sh. 2,811 ft.; no report.
Texas Co. No. 6 Hannah, J. Devore Sur. Drlg. sd. and sh. 4,744 ft.

Bay City—Matagorda County

Hamman Expl. Co. No. 2 Cleveland, E. Hall Sur. R.U.

Palacios—Matagorda County

Glenn H. McCarthy No. 1 Foley Land Co., L. Goodwin Sur. R.U.

Hawkinsville—Matagarda County

Sun Oil Co. No. 2 Craig, T. Williams Sur. Top salt 796 ft.; base salt 2,099 ft.; 18⅝-in. csg. 2,174 ft.; 13⅜-in. csg. 3,700 ft.; 9⅝-in. csg. 5,689 ft.

Van Vleck—Matagarda County

Royal Oil Co. No. 1 Fine Holub, M. Cummings Sur. T.D. 8,280 ft.
Skelly Oil Co. No. 2 Rugely, I.&G.N. Sur. No. 8. 10¾-in. csg. 1,399 ft.; T.D. 8,270 ft.; completing.
Skelly Oil Co. No. 2 Grace Moore, I.&G.N. Sur. Drlg. sh. 6,837 ft.

Ace—Polk County

Peyton Bros. No. 1 A. H. Waldenan, P. A. Sublett Sur. T.D. 4,967 ft.; abd.

Livingston—Polk County

Ownby Drlg. Co. et al No. 9 H. J. Pratt, A. Viesca Sur. R.U.

Segno—Polk County

J. K. Dorrance No. 1 Sarah F. Wing, I.&G. N. Sur. No. 15. Drlg. sh. 3,450 ft.
J. K. Dorrance No. 4 Wing, I.&G.N. Sur. No. 15. Spdd.
Gulf Oil Corp. No. 2 Wing, I.&G.N. Sur. No. 15. Drlg. sh. 4,000 ft.
Gulf Oil Corp. No. 3 Wing, I.&G.N. Sur. No. 15. Drlg. 3,074 ft.
Humble O. & R. Co. No. 1 Kirby Lbr. Co., P. Garcia Sur. Top Cockfield 5,122 ft.; 7-in. csg. 5,187 ft.; T.D. 5,652 ft.; P.B. 5,200 ft.; tstd. S.W.; abd.
Humble O. & R. Co. No. 3-B Kirby Lbr. Co., Marcell Victor Sur. Drk.
LaQuinta Oil Co. No. 1 Wing Est., I.&G.N. Sur. No. 15. T.D. 5,193 ft.; 7-in. 5,182 ft.

Quintana-O'Connor-Greta—Refugio County

Cosmo Pet. Co. No. 16 Heard, Blk. 119, Refugio Townsite. T.D. 4,937 ft.; W. O.C.
Hewitt & Daugherty No. 44 Lambert, Swisher Sur. No. 6. T.D. 5,915 ft.; I.P. 330 B.P.D.; ¼-in. ck.
Houston Oil Co. No. 31 Rooke, T. Mullen Gr. Spdd.
Illinois Pet. Co. No. 3 Heard, Ximines Sur. T.D. 6,520 ft.; I.P. 152 B.P.D.; ⅛-in. ck.
Quintana No. 6 Heard, Webb Sur. Drlg. 3,712 ft.
Quintana No. 14-C Tomoconnor. T.D. 5,950 ft.; W.O.C.
Quintana No. 15-C Tomoconnor, Swisher Sur. Spdd.
United Gas Corp. No. 47 Lambert, Swisher Sur. Drlg. 3,212 ft.
United Gas Co. No. 49 Lambert, Swisher Sur. Drlg. 2,612 ft.
United Gas Co. No. 51 Lambert, Swisher Sur. Cg. 5,930 ft.
United Gas Corp. No. 12 J. J. O'Brien. S.D. 8,357 ft.

Keeran—Victoria County

Gulf Oil Corp. No. 11 J. M. Keeran, M. DeLeon Sur. Spdd.
Union Oil Co. of Calif. No. 4 Keeran, M. DeLeon Sur. Drlg. sh. 4,567 ft.

McFadden—Victoria County

Transwestern Oil Co. No. 3 J. A. McFadden, Julus Varian Sur. R.U.

Placedo—Victoria County

Barnsdall-American Liberty Oil Co. No. 10 J. M. Pickering, Wm. Rupley Sur. T.D. 5,439 ft.; tstg.
Barnsdall-American Liberty Oil Co. No. 15 Pickering and Roos, S.A.&M.G. Sur. No. 6. T.D. 4,774 ft.; I.P. 8 B.P.H.; ⅛-in. ck.
Barnsdall Oil Co.-American Liberty Oil Co. No. 16 Pickering, S.A.&M.G. Sur. Drk.
Costa Oil Co. et al No. 2 J. E. Schovajsa, Wm. Rupley Sur. T.D. 4,772 ft.; jet with gas.
Haynes B. Owenby No. 3 Traylor, S.A.&M. G. Sur. Drlg. sh. 2,830 ft.
Magnolia Pet. Co. No. 7 Sklar, Lot 18, S. A.&M.G. Sur. No. 7. T.D. 4,775 ft.; I.P. 10 B.P.H.; ¼-in. ck.
Portilla O. & G. Co. No. 1 T. P. Traylor, S.A.&M.G. Sur. No. 11. Spdd.
Shell Pet. Corp. No. 3 Houston National Bank, Lot 6, S.A.&M.G. Sur. T.D. 4,760 ft.; I.P. 11 B.P.H.; ¼-in. ck.
Shell Pet. Corp. No. 4 Houston Natl. Bank, S.A.&M.G. Sur. No. 7. R.U.
Superior O. & G. Co. et al No. 6 J. J. Hosek, S.A.&M.G. Sur. Drlg. sh. 4,612 ft.
Superior Oil Co. and Gillespie No. 5 J. J. Hosek, S.A.&M.G. Sur. No. 7. R.U.
Superior Oil Co.-Gillespie No. 7 J. J. Hosek, S.A.&M.G. Sur. No. 7. T.D. 4,741 ft.; I.P. 68 B.P.D.; ¼-in. ck.

Clay Creek—Washington County

Oak Oil Corp. No. 1 G. Cockrell, J. F. Perry Square Sur. Drk.
Sun Oil Co. No. 6 Droger, J. Perry Sur. Drlg. sh. 1,762 ft.
Virginia Oil Co. No. 1 Joe Kenieczny, S. M. Williams Sur. 10¾-in. csg. 104 ft.; drlg. sh. 1,856 ft.

Five Corners—Wharton County

Texas Co. No. 7-B Pierce Est., J. Caldwell Sur. Drlg. sh. and sd. 1,847 ft.
Texas Co. No. 6-B Pierce, J. Hyland Sur. T.D. 5,554 ft.; 7-in. csg. 5,544 ft.; flwd. 114 B.P.D.; ¾-in. ck.

Louise—Wharton County

C. E. Oil Co. No. 1 R. C. Fair, Morris and Cummins Sur. No. 290. Drk.
Pure Oil Co. No. 6 McIntyre, Morris and Cummings Sur. No. 288. 9⅝-in. csg. 916 ft.; drlg. sh. 4,745 ft.

Pickett Ridge—Wharton County

Texas Co. No. 33-A Pierce Est., G.B.&N. Sur. No. 4; 9,000-ft. test. Bldg. drk.
Texas Co. No. 1 Earnest Wittig, J. Telfener Sur. Drlg. sh. 2,215 ft.

Spanish Camp—Wharton County

Albert Plummer et al No. 1 J. R. Clored, S. F. Austin Sur. Drlg. 4,022 ft.; 5-in. csg. 3,015 ft.; perf. 2,975-90 ft.

Withers—Wharton County

Texas Co. No. 25-C Pierce Est., Wm. Pettus Sur. T.D. 5,558 ft.; 7-in. csg. 5,553 ft.; I.P. 200 B.P.D.; 14/64-in. ck.
Texas Co. No. 26-C Pierce, Wm. Pettus Sur. 10¾-in. csg. 1,233 ft.; T.D. 5,563 ft.; 7-in. csg. 5,553 ft.; I.P. 48 B.P.D.; ⅛-in. ck.
Texas Co. No. 27-C Pierce Est., Wm. Pettus Sur. Drlg. sh. 5,550 ft.
Texas Co. No. 28-C Pierce Est., Wm. Pettus Sur. R.U.
Texas Co. No. 29-C Pierce Est., Wm. Pettus Sur. Drk.

GULF COAST WILDCATS

Austin County

R. L. Hopkins No. 1 J. W. Recnecke, J. Stephenson Sur. Drlg. sh. 2,088 ft.

Brazoria County

Pure Oil Co. No. 1 P. M. Slade, S. F. Austin Lge. Drlg. sh. 7,480 ft.
Texas Co. No. 2 Robbins, James W. Brougham Sur. 13⅜-in. csg. 5,498 ft.; drlg. sd. and sh. 5,500 ft.

Calhoun County

Matagorda Oil Co. No. 1 Brundet, Tr. 8, Matagorda Island. 13⅜-in. csg. at 1,826 ft.

Colorado County

Coyle & Concord No. 3-B Powell, I.&G.N. Sur. No. 45. Drk.

Fort Bend County

Research, Inc., No. 1 J. M. Moore, S. Kennedy Sur. 10¾-in. csg. 448 ft.; drlg. sh. 3,400 ft.

Harris County

H. J. DeArman et al No. 1 Tyrell-Garth, L. Hemminway Sur. Drlg. 1,450 ft.
Superior O. & G. Co. No. 1 Butler, Eehrhardt Sur. R.U.
Texas Gulf Prod. Co. No. 1 Gillespie and Garnsey, Simon Contreras Sur. 10¾-in. csg. 1,438 ft.; T.D. 8,084 ft.; perf. csg. 7,097-7,100 ft.; S.D.

Houston County

H. L. Hunt No. 1 J. E. Elliott, J. M. Procella Sur. 13⅜-in. csg. 495 ft.; drlg. sdy. sh. 6,634 ft.

Jefferson County

Magnolia Pet. Co. No. 1 J. H. Phelan, T.&N.O. Sur. No. 14. 13⅜-in. csg. 3,016 ft.; drlg. sh. 7,268 ft.

Lavaca County

Welshire Union Oil Co. No. 1-A Pohl, F. Bass Sur. T.D. 3,250 ft.; P.B. 2,950 ft.; two tests failed; S.D.

Liberty County

Jack Frazier et al No. 1 B. F. Haoachy, Hugh B. Johnson Sur. Drk.

Matagorda County

Continental Oil Co. No. 2 Hawkins Est., D. McCarthy Sur. R.U.
Continental Oil Co. No. 2 Robbins, J. C. Franz Sur. 11¾-in. csg. 6,430 ft.; T.D. 8,912 ft.; 8⅝-in. csg. 8,912 ft.; drlg. sh. 10,550 ft.
United North & South Development Co. No. 1, J. S. Cotton Sur. Drlg. sh. 9,756 ft.

Polk County

C. E. Gates No. 1 L. O. Jackson, J. W. Abbey Sur. 10¾-in. csg. 487 ft.; drlg. sh. 4,135 ft.
Mayo et al No. 1 Catline Mayo, J. G. Loving Sur. 10¾-in. csg. 250 ft.; T.D. 5,101 ft.; abd.

Trinity County

West Prod. Co. No. 1 Texas Long Leaf Lbr. Co., John Williams Sur. R.U.

Tyler County

Republic Prod. Co.-Houston Oil Co. No. 2 Hurd, N. Hurd Sur. 10¾-in. csg. 2,296 ft.; rec. 11 joints of oil on D.S.T. 7,621-41 ft.; 7-in. csg. 7,620 ft.; T.D. 7,641 ft.

Walker County

Garland, Hartman & Page No. 1 Carey Ld. & Dev. Co., D. M. McDonald Sur. R.U.

Waller County

Red Bank Oil Co. No. 1 Roy Chapman, M. Donohoe Sur. Drlg. sh. 1,445 ft.
Stanolind O. & G. Co. No. 1 Wm. Hargrove, T. S. Reese Sur., sec. 110. 10¾-in. csg. 2,510 ft.; drlg. sh. 3,650 ft.

Washington County

K. D. Harriss and Starr No. 1 Ellerman, A. D. Houston Sur. R.U.

Wharton County

S. G. Harrison and H. E. Williams No. 1

H.&G.H. Harfst, Lyman Conlsrite Sur. T.D. 500 ft.; run sur. csg.
Smith and McDannald No. 1 Hurlbut, I. &G.N. Sur. No. 23. Drlg. sh. 4,667 ft.

S. W. TEXAS WILDCATS

Aransas County

Barnsdall Oil Co. No. 1-A Kate Edwards, 330 ft. S line, Lot 85, 660 ft. SW No. 1, Wm. Lewis Sur. D.S.T. 7,447-67 ft.; blew out 1,000-ft. wtr. cushion; closed; rec. 3 gal. dist.; T.D. 7,519 ft.; twisted off D.S. while rmg.; cleaned hole; rmg. to set 9⅞-in. protector csg.

Atascosa County

R. J. Roberts et al No. 1 Elder, Sur. 190. D.&A. 3,280 ft.

Bastrop County

Marts & Beavers No. 1 Harris, McKean Sur. M.I.M.
Spokane-Okla. O. & G. Co. No. 2 Caldwell, Navarro Sur. Drlg. 2,383 ft.

Bee County

L. Glasscock No. 1 Ablinger, J. Ryan Sur. Set sur. csg. 1,350 ft.; sd. 4,828-50 ft. T.D. 5,945 ft.; blew out and controlled; C.P. 3,000 lbs.; cutting out stuck D.S.

Blanco County

E. L. Nixon No. 1 Hornberger, 1,200 ft. S line, 300 ft. E line, Sur. 723. Drlg. 913 ft.

Brooks County

Standard of Tex. No. 1 Mestina, Mestina Lse. No. 3. D.S.T. 2,395-2,405 ft.; rec. 165 ft. fluid, some oil in 12 min.; set csg.; D.S.T. 2,415-22 ft.; rec. sulfur wtr.; cg. ahead 3,027 ft.

Burleson County

M. R. Exploration Co. No. 3 Fountain, Wm. Raleigh Sur. M.I.M.
Red Bank Oil Co. No. 2 Grann, 6,063 ft. N line, 1,900 ft. W line, E. Santef Sur. M.I. rig.

Caldwell County

J. R. Brinkley No. 2 Trammel, Hunter. Sur. Comp.; 8 B.P.H.; T.D. 1,990 ft.
Sackett & Keougham No. 1 Cardwell. D. &A. 1,680 ft.
Sherman Nelson No. 1 Etheridge. 7 Hunter Sur. T.D. 2,180 ft.; R.U.
Taylor Ref. Co. No. 1 Hughes, Reavil Sur. Drlg. 2,020 ft.

Cameron County

Saxet Prod. Co. No. 1 Port Isabel Irr. Co., 600 ft. N line Loma Alta Lake, Sh. 29, Espiritu Santo Gr. R.U.
Stapper Petroleum Corp. No. 1 Port Isabel Irrigation Co., Blk. 17, P.I.I.Co. Subd. Santo Gr. Drlg. 7,327 ft.

DeWitt County

Geo. McMurray Drlg. Co. No. 1 Afflerbach, 1,000-ac. tr. Spdd.

Dimmitt County

Wilcox O. & G. Co. No. 1 Light ranch, 330 ft. N and E line, sec. 67. Drlg. 5,167 ft.

Duval County

Argo Oil Co. No. 4 Smith-Corkill, Sur. 498. Drlg. 1,921 ft.
Texas Co. No. 3-B D.C.R.C., Sur. 583. T.D. 1,683 ft.; P.B. 1,556 ft.; comp.; 784,000 ft. gas per day on ¼-in. ck.; T.P. 500 lbs.
Geo. Viterio No. 1 E. E. Cadena, Blk. 6, Cadena Ranch Subd., Hinojosa Gr. Spdd.

Edwards County

Auld, Dodson & Lyman No. 1 Rigsby, sec. 16. Drlg. 2,567 ft.

Frio County

Amerada Pet. Corp. No. 1 Harriman, Flores Sur. 306. Lost hole; drlg. new hole 1,140 ft.

Goliad County

Goliad Oil Corp. No. 1 Cole, 206 ft. W line, CN&SL, Lot 33, Goliad Town Trs. Drlg. sh. 2,366 ft.

Guadalupe County

Byrd Oil Co. No. 1 Schueneman, G. Dewitt League. Cg. chalk.
J. E. Clark No. 1 Knodel, G. DeWitt Sur. Drk.
J. E. Clark No. 1 Schneider, J. Cantu Sur. Drk.
Louis Crouch No. 1 King, J. D. Clements Sur. R.U.
Lincoln Pet. Co. No. 1 Baenzinger, Mansola Sur. Set csg. 1,990 ft.; drlg. plugs.
Robertson et al No. 1 Blumberg, M. Baker Sur. Drlg. 1,026 ft.

Hidalgo County

Daskam et al No. 2 Daskam, C Lot 14-A, Porc. 45. Drlg. 191 ft.
Young & Bonneau No. 1 Diaz, Tr. 331, Porc. 40. Cg. sh. 2,875 ft.

Jim Hogg County

Cole Pet. Co. No. 1 Yeager, Sur. 452. Cg. 2,956 ft.

Jim Wells County

H. J. O. & G. Co. No. 1 Allen, Blk. 2, Wade ranch. T.A.
Magnolia Pet. Co. No. 7 Seeligson, 10,433-ac. tr., Los Jaboncillos Gr. R.U.
Roberts et al No. 1 Wade, Lot 2, Wade ranch. Loc.
Tesmalis & Reese No. 1 Martha Earhart, 330 ft. S and W lines, 80-ac. tr., Suggs Sur. Cg. 3,737 ft.
Wellington Oil Co. No. 1 C. D. Sevier, 5,877 ft. E line, 5,525 ft. S line, Lola Gr. R.U.

Karnes County

De Graff & Reele No. 1 Cochran, 460 ft. E line, 160 ft. S line, McConnell Lge. S.D. 950 ft. (cor.).
Victoria Drlg. Co. No. 1 John Yanta, J. Hardaway Sur. T.D. 1,511 ft.; S.D.
Victoria Drlg. Co. No. 1 Wm. Yanta, J. Hardaway Sur. M.I.M.

Kerr County

S. W. Forrester No. 1 Bailey, Brendle Sur. No. 408. Set csg. 1,080 ft.; W.O.C.

Live Oak County

Empire G. & F. Co. No. 1 Geo. West, Lot 107, Blk. "B," G. West Subd. R.U.
R. H. Feltner No. 2 Sanger, 330 ft. W line, 990 ft. N line, Sur. 385. R.U.
Loma Oil Co. No. 1 Anderson, 159-ac. tr., J. Turner Sur. D.&A. 1,500 ft.
R. B. Sanger No. 1 Adams, 330 ft. N and E lines, 80-ac. tr., Sur. 122. R.U.
Shell Pet. Corp. No. 1 Davidson, 789.94-ac. tr., John C. Nixon Sur. R.U.
S. E. Wilson No. 1 Southwestern Life Ins. Co., NE¼, NW¼, Blk. 57, Simmons City Subd. Spdd.

McMullen County

Big Rock Oil Corp. No. 1 Martin, Uleiting Sur. No. 6. S.D. 532 ft.
H. K. Boysen No. 1 Murphy, Murphy Sur. 480. S.D. 1,680 ft.
Howell Oil Corp. No. 1 Martin, Sur. 213. Set csg. 60 ft.; W.O.C.
Humble O. & R. Co. No. 1 Gouger, 330 ft. S and E lines, SE¼, sec. 46. Drlg. sh. 3,142 ft.
E. M. Jones No. 3 Ezell, SE¼, sec. 3, Ezell ranch. Drlg. 521 ft.
Rowan & Hope No. 1 Rhodes, NE¼ sec. 18, Seale & Morris Sur. M.I.M.

Medina County

F. Brown No. 1 Bilhartz, 12 mi. SE of Hondo. Prep. set csg. 1,300 ft.
A. Chmel No. 1 Odem, 160 ft. W line, 493 ft. N line tr., Castro Sur. 174. M.I.M.
National Oil Co. of Texas No. 1 Gerdes, Haby Sur. No. 32. Drk.

Nueces County

Clarkwood Oil Co. No. 1 H. B. Baldwin, Blk. 11, Russell Farm Lots. Drlg. 4,943 ft.
L. Glasscock No. 1 Kansas Life. Ins. Co., 330 ft. N and W lines, sec. 196. Drlg. 4,227 ft.
Green River Oil Co. No. 1 Cassens, sec 26, Longorio Sur. Spudded.
H. P. R. Oil Co. No. 1 River Bros., 80-ac. tr., sec. 301, Bishop Subd. Loc.
Southern Minerals Corp. No. 1 R. King, sec. 32, King Farm Lots. S.D.; T.D. 6,000 ft.
Taylor Pet. Co. No. 1 Stiles, Blk. 14, sec. 18, Petronilla ranch. Drk.
Wellington Oil Co. and Seaboard Oil Corp. No. 1 Dugger, sec. 125, Park Subd. Sd. between 3,800 and 3,900 ft.; tstd. 575 ft. P.L.O. at 100 lbs. in 10 min.

Real County

Sun Oil Co. No. 1 Dietert, 1,980 ft. E line, 660 ft. S line, sec. 7, G.W.T.&B. Sur. Set csg. 5,680 ft.; S.G.; drlg. ahead 5,873 ft.

San Patricio County

Conroe Drlg. Co. No. 1 McKamey, Blk. M, Paul Subd. Tstd. S.W. 5,370-74 ft.; D.&A. 6,510 ft.
Wheelock & Collins No. 1 Willis, Lot 3, Gregory Farm Sur. T.D. 5,568 ft.; rmg.
Windsor Oil Co. No. 1 Bissett, Tr. 3, Trivoli Subd., Crockett Sur. Loc.

Starr County

Cook, Morris & Arnold No. 2 S.C.C.C., Blk. 23, Porc. 89. Drlg. sdy. sh. 1,694 ft.
C. T. Daye No. 1 Seabury, Sh. 5, Porc. 75. Drlg. 326 ft.
Donroy Oil Co. No. 1 Ramon, 2,400 ft. SE line, 150 ft. SW line, sec. 150. Cg. 1,281 ft.
Henry Mode et al No. 1 Kelsey-Bass, Blk. 7, Porcs. 86 and 87. Set csg. 157 ft.; W.O.C.
Schwab & Foster No. 1 Munoz, 1,478-ac. tr., El Javali Gr. Spdd.
Transwestern Oil Co. No. 2 Slick, 330 ft. N and E lines, sec. 527. Drlg. hd. sh. 5,497 ft.

Webb County

Balling & Coffey No. 1 South Texas C. Co., Sur. 768. Drlg. 1,260 ft.
C. H. Brady No. 1 Garcia, Sur. 786. Loc.
O. W. Killam No. 1 Garcia, Sur. 1,099. Loc.
O. W. Killam No. 1 Garcia, Sur. 786. T.D. 2,024 ft.; rng. electrical survey.
O. W. Killam No. 1 Laurel Bros., Sur. 333. Sd. 2,031-35 ft.; R.U. to pmp; set csg. 2,026 ft.
Lu-Tex Oil Co. No. 1-A Lone Star Constr. Co., Blk. 26, Porcs. 12, 13 and 14. Drlg. 2,316 ft.
J. W. Magee No. 1 Garcia, Blk. 21, James Subd. R.U.
L. Purnell No. 1 Rosa Benavides, Surs. 677 and 721. Drlg. 55 ft.
F. M. Shaver No. 1 Trafton, Sur. 281. R.U.
Vernor & Carson No. 1 Webster. Sd. 3,040-60 ft.; S.O.; T.D. 3,064 ft.; D.&A.

Willacy County

Ruez-Morton, Inc., No. 1 F. Armendiaz, C Lot 9, Sh. 4, San Juan de Carricitos Gr. Drlg. 537 ft.
Ruez-Morton, Inc., No. 1 Johnson-Stillman, Lot 14, Blk. 25, Sh. 44, San Juan de Carricitos Gr. S.D. 643 ft.

Zapata County

H. Guinn Lewis No. 1 S. Benavides, Blk. 39, Villa Gr. Cg. 1,610 ft.
Lundell Prod. Corp. No. 1 Ramirez, Sh. 1, Porc. 18. Drlg. 882 ft.

Zavalla County

Wilcox O. & G. Co. No. 1 Gillman, sec. 11. Drlg. 3,477 ft.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Ref. Co. No. 2 Maryland Trust Co., 330 ft. N and E lines, Blk. 23. Set csg. 6,516 ft.; T.D., sh. 6,552½ ft.; completing.
Atlantic Ref. Co. No. 5-B McCampbell, Lot 5, Blk. 49. Comp.; 6 B.P.H. on ⅞-in. ck.; T.D. 6,548½ ft.
Atlantic Ref. Co. No. 6-B McCampbell, Blk. 49. Set csg. 7,297 ft.; to perf.
Atlantic Ref. Co. No. 1 Murray, Lots 3 and 4, sec. 38. Set 10-in. csg. 1,450 ft.; W.O.C.
Buckingham Oil Co. No. 2-B McCampbell, Lot 13, Blk. 40. Sd. 7,320-7,400 ft.; S.O. &G.; set csg. 7,440 ft.; sd. 7,112-22 ft.; flwg. 76 B.P.D., 15% S.W. on 9/64-in. ck.
Buckingham Oil Co. No. 4-A McCampbell, Blk. 41, Orick Sur. Sd. 6,540-48 ft.; set csg. and perf. 6,540-44 ft. and 6,546-48 ft.; 74 bbls. oil and 66 bbls. S.W. per day on ⅞-in. ck.; T.D. 6,550½ ft.; comp.
Buckingham Oil Co. No. 6-A McCampbell, Blk. 41. Perf. 7,114-22 ft.; completing.
Landreth Prod. Co. No. 1 McCampbell, Lot 4, Blk. 40. Drlg. 525 ft.
Landreth Prod. Co. No. 3 McCampbell, Lot 4, Blk. 39. Perf. 6,534½-35½ ft.; comp.; 54 B.P.D. on 9/32-in. ck.
Rutherford Oil Co. No. 1 Scrivner, 330 ft. NE and NW line, Lot 16. Set csg. 7,364 ft.; perf. 7,095-7,113 ft.; flwg. large amt. gas with spray oil on ⅛-in. ck.

Plummer—Bee County

Ann Oil Co. No. 2 Smith, J. R. Johnson Sur. Spdd.
W. C. McBride, Inc. No. 1-B Smith, 20-ac. tr., sec. 33, Plummer Subd. Drlg. 2,856 ft.

Strouch—Bee County

Dirks Bros. No. 1 Sinclair, 197-ac. tr., Uranga Gr. D.&A. 4,356 ft.
Texas Prospecting Co. No. 1 Berger, SW¼ sec. 19, Uranga Gr. D.&A. 4,357 ft.
Texas Prospecting Co. No. 2 Berger, SW¼ sec. 19, Uranga Gr. R.U.

Cooksey—Bexar County

W. D. Bacon No. 1 Seffel, Jose Arocha Sur. D.&A. 2,101 ft.

Von Ormy—Bexar County

B. Shadrock No. 9 Barragan. Comp.; 6 B. P.D.; T.D. 660 ft.

Alta Mesa—Brooks County

Standard of Texas No. 4 Mestina, Lse. No. 1. Set 7-in. csg. 2,434 ft.; T.D. 2,445 ft.; comp.; 248 B.P.D.
Standard of Texas No. 5 Mestina, Lease No. 1. Drlg. ahead 2,783 ft.
Standard of Texas No. 6 Mestina, Lse. No. 1. Drlg. 1,132 ft.

Alta Verde—Brooks County

L. & W. Oil Co. No. 1 Singer, Blk. 8, Sur. 436. Resumed operations; T.D. 960 ft.; rmg.

Branyon—Caldwell County

Fred Adams No. 6 Ellison, D. Cooper Sur. Top Edw. L. 2,324 ft.; bailing some oil.
R. B. Byrd No. 1 McGee, J. A. Neal Sur. Drlg. 212 ft.
Commonwealth No. 1 McCrory. Comp.; 242 B.P.D. on ⅜-in. ck.; T.D. 2,170 ft.
Commonwealth No. 2 McCrory. Drlg. 200 ft.
A. Dovre No. 1 Callihan, Cooper Sur. D. &A.; T.D. 1,920 ft.
A. Dovre No. 1-A Callihan, Cooper Sur. Drlg. 2,152 ft.
Easton & Manning No. 3 Lawler. T.D. 2,265 ft.; comp.; no gauge.
Easton & Manning No. 4 Lawler, J. Pinchback Sur. Comp.; 1,248 B.P.D.; T.D. 2,157 ft.
Easton & Manning No. 5 Lawler, J. Pinchback Sur. R.U.
Eckert & Sons No. 2 Fulps, Neill Sur. Setting csg. on chalk; W.O.C.
R. Mallory No. 1 Browne, Miller Sur. R.U.
Mee et al No. 3 Lancaster. Comp.; 40 B. P.D.; T.D. Buda 2,174 ft.
Memphis Nat. Gas Co. No. 2 Young, Miller Sur. Drlg. 830 ft.
H. A. Pagenkopf No. 1 Hanson, Hind Sur. Drlg. 2,615 ft.
Sherman Nelson No. 2 Branyon, D. Cooper Sur. R.U.
Taylor Pet. Co. No. 1 Caldwell County, 4-ac. tr., D. Cooper Sur. Drlg. 566 ft.
Texas Gulf Pet. Co. No. 1 McCrory, Neill Sur. Comp.; 64 B.P.D.; T.D. 2,217 ft.
Whisenant & Trenchard No. 1 Young, J. R. Miller Sur. T.D. 2,225 ft.; R.U. to pmp.

Buchanan—Caldwell County

Easton & Manning No. 2 Cude, Spillars Sur. R.U.
Whittington No. 1 McMahon. Comp.; 40 B.P.D.; T.D. 2,207 ft.

Dunlap—Caldwell County

Kay Oil Co. No. 1 Dunlap, S. Seale Sur. Set csg. 1,928 ft.; W.O.C.

Charamousca—Duval County

N. V. Duncan No. 7 Worden & Draught, Sur. 151. Set csg. 1,534 ft.; W.O.C.
Transwestern Oil Co. No. 11 D.C.R.C., E½, sec. 152. D.&A. 1,683 ft.

Colmena—Duval County

Wellington Oil Co. No. 5 D.C.R.C., Blk. 10, sec. 51. R.U.
Wellington Oil Co. No. 7 D.C.R.C., Blk. 9, sec. 52. Comp.; 6 B.P.H. on ⅝-in. ck.

Driscoll—Duval County

Continental Oil Co. No. 14-A Driscoll-Sevier, Sur. 447. Drlg. 2,963 ft.

Government Wells—Duval County

Magnolia Pet. Co. No. 1 Wendt, Sur. 56. D.&A. 2,490 ft.
Magnolia Pet. Co. No. 18 Wilson, Sur. 248. D.&A. 2,676 ft.
Magnolia Pet. Co. No. 19 Wilson, Sur. 134. R.U.
Southwest Prod. Corp. No. 2 Luptack, SE¼, Sur. 41. R.U.

Hoffman—Duval County

Relience Oil Co. and Kleiner No. 1 Ruiz, Sur. 125. Drlg. 2,821 ft.

Kohler—Duval County

Bunn & Coates No. 4-B Peters, 81-ac. tr., sec. 29. Sd. 1,822-49 ft.; W.O.C.
Chiquita Oil Co. No. 1 Peters, 162-ac. tr., Sur. 162. Drlg. wtr. well.
Clark & Cowden No. 3 Richardson, Sur. 5. T.D. 3,588 ft.; P.B. Cole sd.
Humble O. & R. Co. No. 58-A Kohler, Sur. 164. Drlg. sh. 2,430 ft.
Windsor Oil Co. No. 5-B Peters, Sur. 34. Loc.

Labbe—Duval County

Humble O. & R. Co. No. 1 Roos et al, sec. 119. Drlg. sh. 1,571 ft.

Loma Novia—Duval County

F. J. Gravis No. 4 Hahl, Sur. 64. R.U.
Hamill & Smith No. 2 Keer, Sur. 41. Set csg. on sd.; W.O.C.
Humble O. & R. Co. No. 21-C Welder, Sur. 554. T.D. 2,687 ft.; comp.; 8 B.P.H.
Humble O. & R. Co. No. 22-C Welder, sec. 554. Set csg. 2,689 ft.; W.O.C.
Magnolia Pet. Co. No. 14 Herbst, sec. 70. R.U.
J. V. Redick No. 1 Bishop, S½, N½, sec. 57. Drlg. 2,020 ft.
Texas Co. No. 25 Bishop, Sur. 57. Comp.; 10 B.P.H.; T.D. 2,570 ft.

Lopez—Webb—Duval Counties

W. C. Billings No. 3 fee, Sur. 2. Drlg. 1,320 ft.
Kepley Prod. Co. No. 1 Billings, NW¼, Sur. 6. Drlg. 1,956 ft.
Mills Bennett Prod. Co. No. 17 Billings, sec. 113. Comp.; 4 B.P.D.; T.D. 2,275 ft.
Mortimer & Springer No. 2 Community Tr., Sur. 114. Comp.; 8 B.P.H.; T.D. 2,198 ft.
Mortimer & Springer No. 15-B Maria, Lopez Sur. 112. Comp.; 15 B.P.H.; T.D. 2,225 ft.

North Sweden—Duval County

Argo Oil Co. No. 1 Carrillo, NE¼, sec. 9. M.I.M.
Arkansas Fuel Oil Co. No. 1 Vaello Puig, 330 ft. N and E line, sec. 10, Sweden Farm Lots. Loc.
Benedum & Trees Oil Co. No. 1 Puig, 330 ft. N and W lines, 750-ac. tr., San Andres Gr. R.U.
W. Goldston et al No. 1 Farrias, NE¼, Blk. 9, Sur. 25, Sweden Farm Lots. Loc.
Frank Gravis No. 2 Vaello Puig, 990 ft. S line, 330 ft. W line lse., San Andres Gr. R.U.
Highland Oil Co. No. 1 Farrias, Sweden Farm Lots. Drlg. 100 ft.
Parr Oil Co. No. 1 Vaello Puig, Sur. 24, S. Flores Gr. M.I.M.
Russ Pet. Co. No. 1 Farrias, NE¼, Sweden Farm Lots. Loc.
Smith & Storey No. 1 Smith, Blk. 9, Sweden Farm Lots. Loc.

North Sweden-Palangana—Duval County

F. J. Gravis No. 2-A Schallert, Sur. 255. Set sur. csg.; W.O.C.
Penn Palangana Oil Co. No. 1 C. K. Gravis, Sur. 250. R.U.
Tuttle & Trahan No. 1 Megerle, Sur. 245. Drlg. 720 ft.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 1 D.C.R.C., Sur. 203. Set csg. 1,975 ft.; W.O.C.
Magnolia Pet. Co. No. 17 D.C.R.C., Sur. 100. Set csg. 1,978 ft.; comp.; 75 B.P.D.; T.D. 1,986 ft.
Texas Co. No. 22 D.C.R.C., SW¼, Sur. 100. Set csg. 1,975 ft.; W.O.C.

Seven Sisters—Duval County

A. J. Brinkoeter No. 2 Garcia, Sur. 212. Drlg. 2,053 ft.
Humble O. & R. Co. No. 13 Dowdy, Sur. 272. Sd. 2,703-09 ft.; T.D. 3,007 ft.; D.&A.
Humble O. & R. Co. No. 14 Dowdy, Sur. 272. T.D. 2,569 ft.; comp.; 18 B.P.H.
Humble O. & R. Co. No. 16 Dowdy, sec. 272. Set csg. 2,570 ft.; W.O.C.

Sweden—Duval County

Hiawatha Oil Co. No. 2 Herberger, SW¼, Blk. 14, Agua Poquita Gr. Sd. 5,076-81 ft.; tstd. 200 ft. oil and brackish wtr.
Hiawatha Oil Co. No. 1 Southland, sec. 15, Ball Ranch Subd. T.D. 5,932 ft.; rng. elec. sur.

Thomas-Lockhart—Duval County

Thomas Est. & Lockhart Bros. No. 2 Parr, SW¼, sec. 26. R.U.

Pearsall—Frio County

Amerada Pet. Corp. No. 1 Halff & Oppenheimer (W.O.). Old T.D. 6,312 ft.; R.U. to D.D.
Amerada Pet. Corp. No. 8 Halff & Oppenheimer, S. A. Ditch Sur. 1,104 (W.O.). Drlg. 9,056 ft.
Amerada Pet. Corp. No. 1 Kothman, B. L. Crouch Sur. (W.O.). Old T.D. 4,370 ft.; C.O. to D.D.
Amerada Pet. Corp. No. 1 Smith, Mason Sur. 322 (W.O.). Old T.D. 6.238 ft.; W. O.R.

Hords Creek—Goliad County

Brown & Wheeler No. 1-G Kaufman, Lot 14, Merrill Sur. Drlg. 3,246 ft.

Clark—Guadalupe County

Danvers & Harrison No. 1 Wilson. Comp.; 24 B.P.D.; T.D. 2,546 ft.

Diamond Halff Oil Co. No. 2 Larison, G. DeWitt Sur. Spudded.
Kenedy & Crowley No. 1 Johns, Davis Sur. T.D. 2,507 ft.; completing.
LaJita Corp. No. 4 Denman, Arrington Sur. R.U.
D. Mulholland No. 1 Johns, J. K. Davis Sur. Spudded.

Darst Creek—Guadalupe County

Diamond Halff Oil Co. No. 1 Bibbs, Robinson Sur. Top Edwards 2,852 ft.; T.D. 5,509 ft.; D.&A.
Freeman Oil Co. No. 3 Larrison, G. DeWitt Sur. T.D. 2,700 ft.; dry; P.B. 2,450 ft.; W.O.C.
Riddle Oil Co. No. 1 Williams, G. DeWitt Sur. R.U.
Saxet Prod. Co. No. 1 Inman, G. DeWitt Sur. Comp.; 25 B.P.D.
Saxet Prod. Co. No. 2 Wilson, G. DeWitt Sur. No. 13. Drlg. plugs in chalk.
V. G. Schimmel No. 2 Grimm, DeWitt Sur. T.D. 2,525 ft.; set csg. 2,383 ft.; W.O.C.
Watson No. 1 DeLancey, 400-ac. tr. Top chalk 2,020 ft.; S.O.; to acidize.

Nolte—Guadalupe County

Riddle Oil Co. No. 1 Herff, Gortari Sur. No. 76. T.D. 2,160 ft.; set csg. on 100-ft. sat. chalk; drlg. plug.
Riddle Oil Co. No. 2 Nolte, Lowell Sur. 16. Cg. 1,967 ft.
Wheelock & Collins No. 1 Warnecke, 335-ac. tr. R.U.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande Tr. 2309, Blk. 39. Comp.; gasser; perf. 7,516-26 ft.

Samfordyce—Hidalgo-Starr Counties

Ralph E. Fair No. 1 Marta Luisa, Flores de Chapa 20-ac. tr., Tr. 250, Porc. 38. Drlg. 750 ft.

Alworth—Jim Hogg County

French Oil Co. No. 4 Garza, Blk. 1, Sur. 261. Sd. 1,021-38 ft.; comp.; 10,000,000 ft. gas; T.D. 1,681 ft.

Armagosa—Jim Hogg County

Tesmalis & Reese No. 1 Earhart, John Suggs Sur. T.D. 4,000 ft.; S.D.; W.O.O.

Bentonville—Jim Wells County

Camp Prod. No. 1 Bird, Sh. 7-A, Abajo Gr. Spdd. and set sur. csg.; W.O.C.
Texon Drlg. Co. No. 2 Ralston, 990 ft. N line, 330 ft. W line, sec. 17. R.U.

Sandia—Jim Wells County

Geo. E. Smith No. 1 Wade Ranch. R.U.

West Premont—Jim Wells County

C. A. Glasscock No. 1 Bennett, sec. 77. T.D. 1,959 ft.; S.D.
Graham & Gilcrease No. 1-C Bennett, Lots 65 and 80, sec. 77. Sd. 2,251-57 ft.; set csg.; W.O.C.
Graham & Gilcrease No. 6 Seeligson, Lots 82 and 85, sec. 77. Drlg. 1,210 ft.
T. Graham and Gilcrease Oil Co. No. 2 Laughlin, Lots 23 and 26, sec. 76. Comp. 75 B.P.D. at 2,350 ft.; reworking.
T. Graham and Gilcrease Oil Co. No. 3-B Laughlin, Lots 78 and 83, sec. 77. Comp. 96 B.P.D.; 11/64-in. ck.
Henshaw Bros. No. 1 McGuffin, W½, sec. 230. R.U.
Sloan & Cogswell No. 2 Nash, Lot 118, sec. 76. S.D. 2,362 ft.; D.&A.

North Pettus—Karnes County

Magnolia Pet. Co. No. 14 Porter, Morris Sur. Set sur. csg. 218 ft.; W.O.C.

Kingsville—Kleberg County

Humble O. & R. Co. No. 9 Kleberg, Lot 2, sec. 40. Sd. 3,218-28 ft.; D.S.T. rec. 210 ft. oil, 200 ft. oily mud; W.P. 54 lbs. in 24 min.; T.D. 3,232 ft.; flwg. 25 B. P.D. on ¾-in. ck.

Oakville—Live Oak County

Ohio Fuel Oil Co. No. 2 Rose Brock, L. Romero Sur. Drlg. 2,020 ft.

Loma Alta—McMullen County

J. T. Lanier No. 1 Hagist, SE¼, N½, Sur. 481. Spdd.

North Jacob—McMullen County

F. D. Salter No. 1 Griffith, Osborn Sur. Comp.; 7 B.P.D. on pmp.; T.D. 949 ft.
F. D. Salter No. 2 Griffith, Osborn Sur. Drlg. 365 ft.

Aqua Dulce—Nueces County

Texon Drlg. Co. No. 2-B Sevier, 880-ac. tr., W. W. Chapman Lds., Palto Alto Gr. Set 16-in. csg. 300 ft.; T.D. 6,350 ft.; set csg.; pmpg. mud to kill wild No. 2; T.D. 6,465 ft.
United Prod. Co. No. 1 Harvey, 1,100 ft. W line, 1,050 ft. N line, tr., M. Garza Sur. Oil sd. 7,382-95 ft.; cap. 7,396-98 ft.; top S.W. sd. 7,398 ft.; drlg. 8,887 ft.
J. P. Walker et al No. 2 Ingram, Blk. 9, sec. 6, Ross Peters Subd. Sd. 4,785-4,815 ft.; set csg. 4,785 ft.; comp.; wet gasser.

Baldwin—Nueces County

Hevser & Heard No. 1 Kosar, 152-ac. tr., M. J. Cody Sur. Drlg. 5,007 ft.

Chapman Ranch—Nueces County

Seaboard & Allen No. 1-B Chapman, 1,980 ft. N line, 660 ft. W line, sec. 37. D.&A. 7,012 ft.
Seaboard Oil Corp. and Allen No. 4 Chapman, 660 ft. S line, 3,300 ft. W line, sec. 38. Cg. 5,667 ft.

Clara Driscoll—Nueces County

Houston Oil Co. No. 1 Sevier, 330 ft. S and W lines, 77.1-ac. tr., Quadrilla Irr. Co. Sur. Loc.
Magnolia Pet. Co. No. 2 Sevier, 330 ft. S and W lines, 80-ac. tr., R. Russell Sur. Sd. 5,439-42 ft.; tstd. S.W.; T.D. 5,800 ft.; S.D.
Magnolia Pet. Co. No. 3 Sevier, 80-ac. tr., Russell Sur. R.U.

Flour Bluff—Nueces County

Gem Oil Co. No. 3 Smith, Lot 20, Blk. 47. Sd. 6,660-72 ft.; set csg. 6,658 ft.; W.O.C.
Humble O. & R. Co. et al No. 2 Gulden, Lot 19, Blk. 47. T.D. 6,680 ft.; comp.; 151.8 B.P.D. on ⅛-in. ck.; 7-in. csg. at 6,670 ft.
Humble O. & R. Co. et al No. 3 Gulden, Lot 18, Blk. 47. Drlg. sh. 4,337 ft.
Humble O. & R. Co. No. 2-B Miller, Blk. 21, sec. 48. Set csg. 6,652 ft.; comp.; 160 B.P.D. on ⅛-in. ck.; T.D. 6,663 ft.
Humble O. & R. Co. et al No. 4-A Miller, Lot 19, Blk. 56. Set csg. 6,648 ft.; T.D. 6,658 ft.; comp.; 147.18 B.P.D. on ⅛-in. ck.; sd. 6,633-58 ft.
Humble O. & R. Co. et al No. 5-A Miller, Lot 18, Blk. 56. Drlg. sh. 2,177 ft.
Humble O. & R. Co. No. 1 Thompson. Drlg. sh. 4,220 ft.
Humble O. & R. Co. No. 4 Webb, Lot 9, sec. 47. Drlg. sh. 5,915 ft.
Humble O. & R. Co. et al No. 4 Webster, Lot 27, Blk. 48. Drlg. sh. 6,500 ft.

London—Nueces County

Cosner & Cosner No. 2 Stockton, 40-ac. tr., sec. 25. Drlg. 2,027 ft.
Gem Oil Co. No. 1 Stockton, 330 ft. N and W lines, SE¼, NE¼, sec. 25. Sd. 4,551-56 ft.; tstd. S.W.; D.S.T. 4,716-23 ft.; rec. 250 ft. P.L.O.; set csg.; comp.; gasser spraying dist.; perf. 4,755-61 ft.
Humble O. & R. Co. et al No. 1 Dunn. R.U.
Humble O. & R. Co. et al No. 1-B Ritter, Blk. 55. R.U.

Saxet Heights—Nueces County

Chireno Prod. No. 1 Hillman, 2-ac. tr., Villareal Sur. Drlg. 1,920 ft.
Harrison Drlg. Co. No. 1 Simms, 4-ac. tr., Villareal Sur. T.D. 4,097 ft.; P.B. and sdtrkd. 3,928 ft.; set csg. in sdtrkd. hole 4,098 ft.; completing.
H. H. Hoffman, Tr., No. 1 Beck, Ellendale Gardens No. 2, Lot 13. Cg. 4,073 ft.
Ben F. Smith No. 1 Snowden, 13-ac. tr., Villareal Sur. R.U.
Taylor Pet. Corp. No. 2 Kaler, 10-ac. tr., Villareal Sur. Swbg. 5,146 ft.
Sam Wilson, Jr., No. 1 Koepke, Villareal Sur. Drlg. sh. 2,013 ft.

Saxet—Nueces County

C. Andrade No. 9 McGregor-Belk, 130 ft. S line, 990 ft. E line, lse., Sur. 816. Drlg. 4,577 ft.
Baltic Drlg. Co. No. 4 Harmon, Sur. 416. Sd. 6,958-68 ft.; S.O.; set csg. 6,970 ft.; comp.; no gauge; shut in for stg.
Bentex Oil Co. No. 5 Harmon, 330 ft. S and W line, 50-ac. tr., Sur. 416. T.D. 7,010 ft.; P.B. 5,808 ft.; comp.; 108 B.P. D. on ⅛-in. ck.; sd. 5,772-74 ft.; set csg. 5,808 ft.
R. B. Bryant No. 6 Frank, Sur. 416. T.D. 6,650 ft.; P.B. to sdtrk. 4,000 ft.; sd. 6,-290-6,320 ft.; set csg. at T.D. 6,385 ft.; W.O.C.
Bryant & Howell No. 2 Morgan, Sur. 415. Drlg. 6,246 ft.
Conservative Oil Co. No. 3-B Morgan, Sur. 403. Oil sd. 6,914-28 ft.; set csg. 6,928 ft.; perf. 6,750 ft.; S.W.; perf. 4,048-52 ft.; S.D.; W.O.O.
A. D. Corgey No. 1 Page, 330 ft. S and E lines, 20-ac. tr., Sur. 716. Sd. 6,685-6,-715 ft.; set csg. 6,715 ft.; recmtg. perf. 6,690-95 ft.; tstg.
Crown Central Pet. Corp. No. 6-B Morgan, 80-ac. tr., Sur. 592. Sd. 4,449-53 ft.; set csg. 4,442 ft.; W.O.C.
Crown Central Pet. Corp. No. 9-BB Morgan, Russell Farm Lots. Drlg. 3,863 ft.
Donico Prod. Co. No. 2 Donigan, 330 ft. W line, 2,004 ft. S line, 80-ac. tr., sec. 7, Rge. 6, Kinney Lds. Sd. 4,854-60 ft.; set csg.; W.O.C.
Donico Prod. Co. No. 4 Donigan, 60-ac. tr., Villareal Sur. Cg. 4,791 ft.
Gilcrease Oil Co. No. 3 Sullivan, 140-ac. tr., Thos. Gallagher Sur. S.D. 3,852 ft.; W.O.O.
L. Glasscock No. 2 Johns, 20-ac. tr., MacGregor Sur. 582. M.I.M.
L. Glasscock No. 3 Hunter, 990 ft. N line, 330 ft. W line, 160-ac. tr., Dunn Sur. 312. Perf. 4,861-63 ft.; comp.; 75 B.P.D. on ¾-in. ck.
Tom Graham No. 3 Harmon, 20-ac. tr., Sur. 416. Set csg. on sd. 6,728-39 ft.
Great States and Violet No. 9 McGregor-Belk, 73.6-ac. tr., sec. 311. Drlg. 5,167 ft.
Hiawatha Oil Co. No. 8 Hutchins-Stillwell, Lot 30, Sheppard Farm Lds. Sd. 5,819-30 ft.; drlg. 6,511 ft.
Hiawatha Oil Co. No. 9 Hutchins-Stillwell, Lot 34, Sheppard Lds. Fsg. core bbl.; sd. 6,719-37 ft.
Hiawatha Oil Co. No. 4-B Smith, Sheppard Farm, Lot 35. Drlg. 5,193 ft.
Hiawatha Oil Co. No. 5-B Smith, Blk. 35, Sheppard Farm Lots. Set csg. 1,090 ft.; W.O.C.
Houston Oil Co. No. 9 McGregor, 135-ac. tr., Sur. 582. Drlg. 4,250 ft.
Houston Oil Co. No. 22 Morgan, sec. 7, Rge. 5. Set csg. 4,425 ft.; comp.; 205 B.P.D. on ⅞-in. ck.
Houston Oil Co. No. 23 Morgan, sec. 7, Rge. 5. R.U.
Houston Oil Co. No. 24 Morgan, sec. 7, Rge. 5. Set 10-in. csg. 997 ft.; W.O.C.
H. H. Howell No. 4 Hutchins, 80-ac. tr., Sur. 416. Cg. 6,299 ft.
H. H. Howell No. 2 Morgan, Blk. 3, NW¼, Sur. 415. T.D. 6,328 ft.; perf. 5,763-69 ft.; cleaning.
Kepley Prod. Co. No. 3 Donigan, 100-ac. tr., sec. 7, Rge. 5. Sd. 4,861-69 ft.; reperf. 4,858-60 ft.; comp.; 110 B.P.D. on ¼-in. ck.
Maryland Corp. No. 1 Carson, 7-ac. tr., Sur. 416. O.W.W.O.; old T.D. 5,843 ft.; T.D. 6,940 ft.; set csg. 6,350 ft.; comp.; wet gasser spraying oil; perf. 5,763-69 ft.
Morgan & Chapman Minerals No. 6 Morgan Clark, NE¼, Sur. 405. Sd. 5,853-72 ft.; set csg. 5,872 ft.; perf. 5,857½-67½ ft.; comp.; no gauge.
North Star Oil Co. No. 11 Rand Morgan, 80-ac. tr., Sur. 405. Drlg. 6,683 ft.
Pan American Prod. Co. No. 5-C Morgan, E½ SW¼, Sur. 405. Sd. 6,895-6,905 ft.; set csg. 6,899 ft.; W.O.C.
Pan American Prod. Co. No. 6-D Morgan, Sur. 405. Drlg. 6,520 ft.
Pan American Prod. Co. No. 5-B Sagarin, Sur. 500. Drlg. 5,737 ft.
Pan American Prod. Co. No. 2 Solar Sevier Sur. 582. Set csg. 6,293 ft.; cleaning in pits.
Phillips Pet. Co. No. 1 Frank, 27.5-ac. tr., Sur. 500. Set sur. csg.; W.O.C.
Phillips Pet. Co. No. 5 Hutchins, Sheppard Farm, Lot 29 (W.O.). Old T.D. 6,-950 ft.; killed and cmtd. perf.
Port O. & G. Co. No. 3 Cox & Cryder, Sd. 3,814-28 ft.; set csg. 3,851 ft.; swbg.
Potter & Snowden No. 1 Kocurek, 26-ac. tr., Sur. 25. Set 5½-in. csg. at T.D. 4,-209 ft.; perf. 4,125 ft.; comp.; 131 B.P. D. on ¼-in. ck.
Potter & Snowden No. 2 Kocurek, 26-ac. tr., Sur. 25. Drlg. 1,210 ft.
Potter & Snowden No. 1 Taggert, Blk. 5, Sur. 401. Drlg. 1,735 ft.
Renwar & Maryland No. 1-A Rand Morgan, Sur. 415. O.W.W.O.; R.U. to deepen; old T.D. 5,825 ft.
Republic Nat. Gas Co. No. 2 McCampbell, 144-ac. tr. Drlg. 4,273 ft.
Republic Nat. Gas Co. No. 3-A Morgan, sec. 405. Drlg. 1,780 ft.
Republic Nat. Gas Co. No. 3 Walton, 40-ac. tr., Page Lds. Sur. Sd. 4,229-42 ft.; comp.; gasser.
Richardson Pet. Co. No. 7 Cain & Secrist, Blk. 23, Russell Farm Lots. Sd. 4,425-33 ft.; set csg.; comp.; no gauge.
Richardson Pet. Co. No. 13 Cain & Secrist, Russell Farm, Lot 23. Sd. 4,425-31 ft.; set csg.; comp.; 264 B.P.D. on ⅞-in. ck.
Richardson Pet. Co. No. 16 Cain & Secrist, Lot 23, Russell Farm Lots. Set Sur. csg.; W.O.C.
Richardson Pet. Co. No. 2 Hoelscher, Blk. 22, Russell Farm Trs. Sd. 4,450-58 ft.; washing in.
Richardson Pet. Co. No. 8 Quiros, Blk. 36, Sheppard Farm Trs. Drlg. 4,846 ft.
Richardson Pet. Co. No. 9 Quiros, Blk. 36, Sheppard Lots. Drlg. 5,026 ft.
Southern Minerals Corp. No. 20 Bliss, 120-ac. tr., Sur. 416. Drlg. 4,625 ft.
Texon Drlg. Co. No. 6 Ocker, 200 ac. tr., Ward Surs. 402 and 316. Spddg.
Texon Drlg. Co. No. 5 Vance, Thos. Gallagher Sur. T.D. 7,000 ft.; sdtrkd. 6,-400 ft.; sd. 6,914-20 ft.; perf. csg. 6,913-17½ ft.; completing.

Stratton—Nueces County

Camp Prod. Co. No. 1 Wordner, 330 ft. E line, 1,280 ft. N line, sec. 12, Stratton Subd. Set csg. 6,111 ft.; perf. 5,992-6,002 ft.; comp.; flwg. est. 50 B.P.D. on ⅛-in. ck.; T.D. 6,715 ft.

Sullivan—Nueces County

Invincible Oil Co. No. 1-B Elliff, 406 ft. S and W lines, 160-ac. tr., Longorio Gr. Perf. 5,772-78 ft.; comp.; est. 10 B.P.D.; 58.5 grav. oil and 3,000,000 ft. gas.
Lockhart et al No. 1 O. Purl, Lot 2, sec. 7, Ross Peters Subd. No. 2. R.U.

Plymouth—San Patricio County

Humble O. & R. Co. No. 1 Blaschke & Mayo, Lot 8, sec. 25. Sd. 5,530-35 ft.; comp.
Humble O. & R. Co. No. 2 Blaschke & Mayo, Lot 8, sec. 25, Fourth Addn. R.U.
Magnolia Pet. Co. No. 12 C. C. Bank, 466 ft. N and E lines, Fessenden Sur. Set csg. 6,648 ft.; W.O.C.
Plymouth Oil Co. No. 71-C Welder, sec. 71. Comp.; est. 200 B.P.D. on ⅛-in. ck.; sd. 5,627-44 ft.
Plymouth Oil Co. No. 73-C Welder, sec. 71. Set csg. 352 ft.; comp.; 175 B.P.D. on ⅛-in. ck.; sd. 5,629-45 ft.

Taft Field—San Patricio County

Cage Prod. Co. No. 1 Mayo, Fessenden Sur. D.&A. 5,002 ft.
Esves Oil Co. No. 4 Britton, Lot 8, sec. 6, Third Addn. Rng. lnr.; sd. 4,361-67 ft.
Esves Oil Co. No. 7 Britton, sec. 6. Cg. 4,937 ft.
Humble O. & R. Co. No. 1 Blaschke & Mayo, Lot 8, sec. 25. Drlg. sd. 6,195 ft.
Humble O. & R. Co. No. 20 Mayo, Ottman Sur. Comp.; 4 B.P.H.; sd. 4,352-60 ft.
Humble O. & R. Co. No. 21 Mayo, Ottman Sur. Comp.; 190 B.P.D. on ⅞-in. ck.; sd. 3,958-86 ft.
Shell Pet. Corp. No. 6 Pullin, sec. 1, Second Addn. T.D. 4,923 ft.; P.B. 3,920 ft.

Margo—Starr County

Dolgener et al No. 1 Garcia, 10-ac. tr., Sh. 7-B, Porc. 71. Drlg. 337 ft.

Barbacoas—Starr County

K. E. Merren No. 1-A S.C.C.C., Blk. 34, Lambeth Subd., Porc. 89. Drlg. sh. 1,-057 ft.

Ricaby—Starr County

Moss & Heard No. 2 Ricaby, Porc. 83. (W.O.); cg. S.W. sd. 1,726 ft.

Rio Grande City—Starr County

Clopton & Reed No. 1 Green, Porc. 80. T.D. 4,600 ft.; S.G.; P.B. 1,681 ft.; set csg.; W.O.C.
Clopton & Reed No. 4 Tijerina, Lot 12, Sh. 14-C, Porc. 80. Cg. 1,423 ft.

Woods—Starr County

G. E. Dodds, Tr., No. 2 Woods Est., Porc. 84. Drlg. sh. 1,421 ft.

Aviator—Webb County

Joe Palmer No. 1 Garcia, Sur. 463. R.U.

Cole—Webb County

Highland Oil Co. No. 1 Bruni, Surs. 7 and 8, Loc.
O. W. Killam No. 50 Bruni, C Blk. 10, Sur. 8, Foltz Subd. Sd. 3,417-31 ft.; tstd. oil; comp.; 12 B.P.D.; ⅞-in ck.

Killam—Webb County

C. H. Bailey No. 1 Garcia, Sur. 333. Drlg. sh. 1,362 ft.
Hamill & Smith No. 1 Garcia, sec. 1099. Set csg. 2,012 ft.
O. W. Killam No. 51 Bruni, Blk. 15, Sur. 8. Drlg. 2,117 ft.
O. W. Killam No. 1 Garcia, Sur. 786. Sd. 2,010-24 ft.; comp.; 3 B.P.H.

O'Hern—Webb County

Magnolia Pet. Co. No. 25 S. Benavides, Hale Subd. Set csg. 2,831 ft.; W.O.C.
Magnolia Pet. Co. No. 28 Benavides, Hale Subd. Set csg. 2,831 ft.; W.O.C.
Magnolia Pet. Co. No. 42 Benavides, Hale Subd. Drlg. 621 ft.
J. J. O'Hern No. 3-C Benavides, Blk. 24. Drlg. 250 ft.
H. M. Reed No. 4 Benavides, Blk. 299, Hale Subd. Swbg. 2,916 ft.
Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173. M.I.M.
Sun Oil Co. No. 9-A Benavides, Hale Subd. T.D. 2,920 ft.; completing.

LaSal Vieja—Willacy County

Shell Pet. Corp. No. 1 Yturria, Sh. 64, Carricitos Gr. (W.O.); set csg. 7,630 ft.; cg. sd. 9,261 ft.

Byersville—Williamson County

Taylor Ref. Co. No. 8-B Heap, H. White Sur. R.U.

Charco Redondo—Zapata County

W. C. Bob No. 2 Martinez, S¼, Blk. 22, Quandado Gr. Sd. 670-72 ft.; set csg.; M.I.R.

Cuellar—Zapata County

Magnolia Pet. Co. No. 3 Cuellar, Sur. 245. T.D. 1,573 ft.; D.&A.
Magnolia Pet. Co. No. 4 Cuellar, Sur. 245. Drlg. 721 ft.

Escobas—Zapata County

Earl Calloway No. 5 Bustamente, Sh. 8, Fansler Part. Comp.; 75 B.P.D.; T.D. 1,216 ft.
Earl Calloway No. 8 Bustamente, Sh. 8, Fansler Part. Comp.; 75 B.P.D.; T.D. 1,218 ft.
Earl Calloway No. 10 Bustamente, Sh. 8, Fansler Part. Comp.; 45 B.P.D.; T.D. 1,213 ft.
Earl Calloway No. 11 Bustamente, Sh. 8, Fansler Part. Comp.; 45 B.P.D.; T.D. 1,217 ft.
Earl Calloway No. 10 Santos, Sh. 7, Fansler Part. Comp. 50 B.P.D.; T.D. 1,225 ft.
Sam Evans No. 4 Garcia, Blk. 19, Douglas Subd. D.&A. 1,400 ft.
Matthews Drlg. Co. No. 6 Garcia, Sh. 3, Fansler Part. Comp.; 14 B.P.D.; T.D. 1,065 ft.
Matthews Drlg. Co. No. 13 Garcia, Sh. 3, Fansler Part. Drlg. 950 ft.
Nordan & Morris No. 3 Bustamente, Sh. 33, Fansler Part. Comp.; 35 B.P.D.; T.D. 1,251 ft.
Nordan & Morris No. 4 Bustamente, Sh. 33, Fansler Part. Set csg. 1,257 ft.; W. O.C.
Nordan & Morris No. 5 Bustamente, Sh. 33, Fansler Part. Drlg. 1,257 ft.
E. C. Reeves No. 1 Bustamente, Sh. 9, Fansler Part. D.&A. 1,167 ft.
E. C. Reeves No. 1-A Bustamente, Sh. 9, Fansler Part. Drlg. 520 ft.
Texas Co. No. 98 Jennings, Cerrito Blanco Gr. T.D. 1,326 ft.; comp.; 10 B.P.H.
Texas Co. No. 99 Jennings, Cerrito Blanco. Gr. M.I.M.
Texas Pipe & Supply Co. No. 1 Bustamente, Sh. 9, Fansler Part. Sd. 1,178-86 ft.; comp.; 45 B.P.D.
Texas Pipe & Supply Co. No. 2 Bustamente, Sh. 9, Fansler Part. Drlg. 350 ft.

Haynes—Zapata County

Magnolia Pet. Co. No. 4 Haynes, Blk. 5, Haynes Subd. R.U.
Valley Osage Oil Co. No. 1-B Haynes, Blk. 14, Haynes Subd. D.&A. 1,179 ft.
Valley Osage Oil Co. No. 2-B Haynes, Blk. 14, Haynes Subd. D.&A. 1,170 ft.
Valley Osage Oil Co. No. 3-B Haynes, Blk. 14, Haynes Subd. Sd. 1,175-81 ft.; set csg.; W.O.C.

Lopena—Zapata County

Dalport Oil Corp. No. 1 Vela, Porc. 20. Cg. 2,321 ft.

Martinez—Zapata County

Sylvan Price No. 1 Maryland Trust Est., Blk. 15, Sur. 314. Drlg. 1,926 ft.

E. C. TEXAS WILDCATS

Anderson County

American Liberty Oil Co. No. 1 G. E. Gauge, Blackfoot area, B. Gilbert Sur. Top Paluxy 6,758 ft.; top Glen Rose 7,029 ft.; cg. 8,762 ft.
Tide Water Oil Co. et al No. 7 Monnig, S. Sanchez Sur., deep test, Long Lake field. Cg. 9,000 ft.

Angelina County

B. F. Hoffman No. 1 So. Pine Lbr. Co., B. J. Thompson Sur., C of SE¼ of Blk. 11, NE of Dibol. Fsg. 2,236 ft.
Ed Holman et al No. 1 J. E. Hawkins, 150 ft. N and E of 40-ac. tr. in Bradshaw Sur., S of Huntington. Drlg. 1,-330 ft.

Bowie County

Thompson & Jaffie No. 1 R. Rosalind, J.

Milam Sur., 3 mi. SW of Redwater. Drlg. 3,734 ft.
Woodley & Bently No. 1 Lumpkin. Drlg. 1,841 ft.; old T.D. 4,404 ft.

Cherokee County

A. F. Richardson No. 1 F. P. O'Brien, G. S. Clapp Sur., 3 mi. NW of Rusk; 5,000-ft. test. Loc.
Staco Oil Co. et al No. 1 E. B. Parks, 6,600 ft. W line and 2,450 ft. S line of J. T. Cook Sur., 4 mi. SW of Rusk. Drlg. 2,863 ft.

Falls County

H. H. Bell et al No. 1 A. Garrett, J. M. Sanches Sur. S.D. 312 ft.

Fannin County

Joiner-Owens No. 1 Dr. Grey, 13,450 ft. S and 1,600 ft. E of Alex Russell Sur., 4½ mi. W of Monktown. R.U.

Freestone County

C. F. Lytle No. 1 R. Simmons, 23-ac. tr., R. B. Loughbotham Sur., 1 mi. S of Wortham. Drlg. 3,839 ft.
Stroude et al No. 1 P. Mullens, R. D. Sloan Sur., 6 mi. NE of Fairfield. T.D. 341 ft.; hole caving.

Henderson County

Tide Water et al No. 1 McElreath & Suggett. Top Georgetown 4,990 ft.; top Paluxy 6,005 ft.; top Glenrose 6,270-80 ft.; S.D. 7,195 ft.; prod. 37.5 grav. oil; milling off bit.

Hill County

A. N. Mabry No. 1 J. T. Jones, 1 mi. S of Mt. Calm, Graves Sur. S.D. 754 ft.

Hopkins County

J. Carpenter Oil Co. No. 1 Gillis, between Brashear and Cumby, J. L. Worsham Sur. Drk.
Hughes & Williams No. 1 fee, 6 mi. SE of Brashear, Agaton Caro Sur. Spdd.
Rio Oil Co. No. 1 R. A. Logan, A. Wetmore Sur. Top Woodbine 3,124 ft.; top Paluxy 4,523 ft.; cg. 4,562 ft.

Houston County

American Liberty Oil Co. No. 1 W. L. Moody, 330 ft. N and E of 155-ac. tr. in S. C. Parker Sur., 1½ mi. NW of Grapeland. M.I.M.
E. B. Germany et al No. 1 E. M. Young, 330 ft. S and W. J. J. Thomas Sur., at Lovelady Sur. Drlg. 1,252 ft.
Placid Oil Co. No. 1 Elliott in J. Procella Sur., 5½ mi. NE of Grapeland. Drlg. 6,520 ft.

Hunt County

Penn Oil Corp. No. 1 R. B. Parish, C 100-ac. tr., N. Dauley Sur., 7 mi. NE of Lone Oak. S.D. 4,711 ft.
Stanolind O. & G. Co. No. 1 J. P. Hawks, R. Ragsdale Sur., near Campbell. Top Pecan 1,150 ft.; drlg. 2,251 ft.
Texola Land Corp. No. 1 J. M. Goin, Jas. Merrick Sur., 2 mi. SW of Wolfe City. S.D. 40 ft.

Kaufman County

Scott & Woodside No. 1 W. and T. Nash, in J. Cortez Sur., 1 mi. E of Scurry. Cg. 1,844 ft.

Lamar County

Cooper Bros. et al No. 1 L. P. Hayes, 1 mi. W of Deport, 600 ft. S of Doyle-Jondeau No. 1 Guest dry hole, Luke Roberts Sur. Drlg. 1,975 ft.
Lowery-Cutler No. 1 E. C. Porter, Thos. King Sur. Top Georgetown 354 ft.; S.D. 1,647 ft.

Limestone County

A. W. Phillips et al No. 1 E. M. Speight, M. Herrin Sur., 6½ mi. SE of Mexia. S.D. 3,695 ft.
Pure Oil Co. No. 16-T Kendrick, P. Varella Sur., Mexia field. T.D. 2,984 ft.; P.B. to 2,235 ft.; fsg.

Red River County

Roy I. Carter Drlg. Co. No. 1 J. A. Tutt, C 40-ac. tr. in D. Hart Sur., 2 mi. S of Avery. S.D. 410 ft.

Rusk County

J. G. Mayo No. 1 S. C. Sanford, W. A. Corder Sur., 10 mi. E of Mt. Enterprise. Loc.

Van Zandt County

Humble O. & R. Co. No. 1 L. K. Riggs, W. Daniels Sur. Deep test; top Georgetown 3,725 ft.; top Paluxy 4,645 ft.; T.D. 4,664 ft.; drlg. by whipstock.

EAST TEXAS

(Border Counties)

Cass County

American Liberty No. 1 B. E. Echlos, H. Holbert Sur. Drlg. 5,975 ft.
Arkansas-Louisiana No. 1 George, Wm. R. Myers Sur. Drlg. 5,419 ft.
Gulf Prod. Co. No. 1 W. T. Henry, H. Owens Sur., NW cor. survey. M.I.M.
P. L. Hoffman No. 3 Davis, J. S. Smith Sur. Drlg. 5,750 ft.
Magnolia No. 11 J. E. George, John Collum Sur. Drlg. 6,545 ft.
Magnolia No. 13 J. E. George, John Collum Sur. Comp.; flw. 10 B.P.H.; T.D. 6,080 ft.
Magnolia Pet. No. 3 W. M. Hall, Wilson Robinson Sur. Drk.
Magnolia No. 1 Haver & Thatcher, Jacob Carsner Sur. T.D. 6,075 ft.; W.O.
Magnolia No. 11 L. Haywood, SE cor. P Evans Sur. Comp.; flw. 138 bbls. in 8 hrs.; T.D. 5,952 ft.
Magnolia Pet. Co. No. 13 L. Haywood, P. Evans Sur. Comp.; 500 B.P.D.; T.D. 5,978 ft.
Magnolia Pet. No. 14 L. Haywood, P. Evans Sur. Drlg. 3,875 ft.
Magnolia Pet. No. 15 L. Haywood, P. Evans Sur. Drlg. 3,644 ft.
Magnolia Pet. No. 17 L. Haywood, P. Evans Sur. Drlg. 4,295 ft.
Magnolia No. 6 W. M. Hall, John N. Jackson Sur. Cg. 6,015 ft.
R. W. Norton No. 6 Davis, H. Holbert Sur. Drlg. 4,490 ft.
R. W. Norton No. 7 Davis, H. Holbert Sur. Drlg. 5,593 ft.
Ohio Oil Co No. 13 R. P. Willis, S.F.I.W. Sur. No. 1263. 10-in. cmtd. 2,060 ft.
J. G. Puterbaugh et al No. 1 Doorley, Calloway Davis Sur., 14 mi. N of Rodessa. Drlg. 4,451 ft.
Texas Co. No. 1 Chatten, Wm. R. Myers Sur. Drlg. 2,255 ft.
Texas Co. No. 8 McLeod, W. A. Elliott Sur. Cmtd. 7-in. 6,108 ft.; T.D. 6,111 ft.
Texas Co. No. 7 N. A. Rambo, Cass Co. Sch. Ld. Sur. Comp.; flw. 720 B.P.D.; T.D. 6,022 ft.
United Prod. No. 6 Baugus Unit, R. Trammel Sur. Drlg. 3,979 ft.
United Prod. No. 1 Belote, H. Holbert Sur. Rng. 7-in.; T.D. 6,000 ft.
United Prod. No. 1 Bivens, John Collum Sur. Comp.; flw. 6 B.P.H.; T.D. 5,940 ft.
United Prod. No. 3-A J. A. Bewley, H. Holbert Sur. Drlg. 5,970 ft.
United Prod. No. 2 Q. Clements, Wm. B. Hughes Sur. Drlg. 4,290 ft.
United Prod. No. 1 J. S. Hall, Wm. Robinson Sur. Rng. 7-in.; T.D. 6,017 ft.
United Prod. No. 2 J. S. Hall, Wm. Robinson Sur. Drlg. 5,773 ft.
United Prod. No. 3 J. S. Hall, Wm. Robinson Sur. Drlg. 6,040 ft.
United Prod. Co. No. 1 Kate, Spell Unit, C. C. Sch. Ld. Drlg. 5,540 ft.
United Prod. Co. No. 1 J. W. Land, R. Potter Sur. Cg. 6,911 ft.
United Prod. No. 1 R. O. Long, W. Robinson Sur. 7-in. cmtd. 6,006 ft.; T.D. 6,017 ft.
Vaughn Prod. Co. No. 1 Willis, S.F.I.W. Sur. 1263. Comp.; flw. 17 B.P.H.; T.D. 5,987 ft.

Harrison County

H. H. Alvord et al No. 1 M. A. Flannagan, L. Wormack Sur. T.D. 2,440 ft.; W.O. S.R.
Geyer Oil Co. No. 1 Moore, Fields Sur. R.U.
Geyer Oil Co. No. 2-B Vincent, Davenport Sur. T.D. 2,135 ft.; S.D.
Highway 80 Oil Co. No. 1 George Powell Sur. T.D. 825 ft.; S.D.
Midfield Oil Co. No. 1 Lane & Greer, Baker Sur. T.D. 2,338 ft.; reacidized and tstg.
Patsam Oil Co. No. 2 Z. Douglas, S. Fields Sur. T.D. 2,520 ft.; tstg.

Marion County—Rodessa

Arkansas-Louisiana No. 1 C. C. Braden, T. Hanson Sur. Drlg. 2,150 ft.
Arkansas-La. No. 1 Laura McIntosh, Edmondson Sur. Drlg. 6,452 ft.
Hunter Co. No. 1 E. W. Fonda, A. D. S. Coy Sur. Drlg. 5,300 ft.

Panola County

Danciger O. & R. No. 1 Tatum, A. Bissell Sur. R.U.
R. H. Dearing & Sons No. 1 Wooten Est., W. Mann Sur. R.U.
Glassell & Glassell No. 1 Pierce & Chesbro, Julia Soape Sur. Loc.
Magnolia Pet. Co. No. 2 E. A. Hull, Thos. Applewhite Sur. Drlg. 5,280 ft.

Shelby County

Wm. Redditt No. 1 Pickering Lbr. Co., SE cor. Stephens English Sur. S.D. 2,165 ft.; laying fuel line and prep. to D.D.
H. A. Stebbinger No. 1 Pickering Lbr. Co., on 160-ac. tr. in A. Hanson Sur. T.D. 5,080 ft.; shows oil; wtg. on csg.

NORTH TEXAS WILDCATS

Archer County

O. P. Darsey No. 1 J. T. Longley, sec. 1839, T.E.&L. Sur. S.D. 150 ft.

Clay County

L. T. Burns No. 1 Sanzenbacker, L. N. Sparks Sur. A-401. Drlg. 508 ft.
Foster Minerals Corp. No. 1 V. H. Yarbrough M. Lassiter Sur. A-288. Matl.
Walter H. Gant No. 3 C. M. Worsham, H. &T.C. Sur., Blk. 4. Drlg. 3,815 ft.
Green Mt. Oil Co. No. 1 Staggs, sec. 34, A.C.S.L. Sur. Drlg. 3,290 ft.

Cooke County

Denver P. & R. Co. No. 1 Solomon, W. G. Hunt Sur. A-493. Drk.
Peterson et al No. 1 J. M. Floyd, Chas. DeMorse Sur. A-305. S.D.O. 870 ft.
Sparks & Russell No. 1 C. F. Bundy, P. P. Cary Sur. A-1239. Spud. and S.D.

Denton County

Bolivar Drlg. Co. No. 1 Bentley, J. Yoakum Sur. A-1443. Core S.S.O. 1,698-1,705 ft.; test show oil; drlg. 2,010 ft.
Geo. Greer No. 1 Ross, J. P. Melton Sur. A-802. Spdg.
Oil Finance No. 1 J. S. Gambill. S.D.O. 2,030 ft.
Ruwaldt & Martin No. 1 Joe S. Gambill, J. B. January Sur. A-658. Testing S.S.O. 1,609-20 ft.; 6⅝-in. 1,609 ft.

Grayson County

North Texas Oil Co. No. 1 A. M. Smith, R. M. Williamson Sur. A-1300. S.D.O. 370 ft.
Olson et al No. 1 D. R. Uitger, P. P. Cady Sur. A-301. Fsg. 1,800 ft.; D.S. at 5,751 ft.

Hardeman County

Locke & Durham No. 1 A. Schoppa, sec. 57, H.&T.C. Sur., Blk. 16. S.D.O. 711 ft.

Jack County

Big "6" Oil Co. No. 1 J. S. Callis, S.P.R.R. Sur. A-575. Drlg. 2,680 ft.
F. S. Freeland No. 1 R. E. Graves, S. Hazel Sur. A-258. Drk.
H. M. Leidecker No. 1 J. W. Padgett, E. Allbritton Sur. A-1890. Drlg. 2,170 ft.
H. B. Madden No. 1 J. L. Mask, sec. 2708, T.E.&L. Sur. Spdg.
H. S. Moss No. 1 Bloodworth, G. Thompson Sur. A-612. Fish. tools 2,910 ft.
Tebay & Leberman No. 1 S. E. and E. W. Rankin, J. P. Thompson Sur. Spud and S.D.
Tillman et al No. 1 Jones, J. Helmstutter Sur. No. A-1269. Drk.
R. A. Westbrook No. 1 Worthington-Knox, B.B.B.&C. Sur. A-185. R.U.C.T.

Montague County

Denver P. & R. Co. No. 1 Copeland, Blk. 162, Kembro Sur. 7-in. O.D. 3,880 ft.; P.B. 4,200 ft.; W.O.C.; S.S.O. 3,880-3,900 ft.
Gibson-Jennings No. 1 J. G. Howard, Blk. 91, K.C.S.L. Sur. Drlg. 1,910 ft.
Moss Holmes No. 1 I. N. Monroe, F. Secrest Sur. A-665. Spudded.
Montague Oil Co., Inc., No. 1 W. J. Bell, sec. 2,882, T.E.&L. Sur. Fsg. csg.; T.D. 4,210 ft.; 8¼-in. 3,904 ft. collapsed; fishing.
Selby O. & G. Co. No. 1 J. M. Batts, M. B. Tatum Sur. A-740. Drlg. 3,300 ft.
Ventex Investments, Ltd., No. 1 S. E. Bell, sec. 11, M.E.P.&P. Sur. Repr. rig 2,825 ft.

Wichita County

Christie et al No. 1 Vanmeter, Blk. 35, K.W.V.F.L. Sur. Drlg. 2,975 ft.
Leo Oil Co. No. 1 Fonville, sec. 323, Waggoner Co. Sur. R.U. and S.D.
Petroleum Prod. Co. No. 73 First National Co., Blk. 29, K.W.V.F.L. Sur. 7-in. csg. cmt. 3,671 ft.; S.L. 3,720-43 ft.; treated acd.; est. 150 B.P.D. at 3,800 ft.; fishing tools; flowing 20 B.P.H.

Wilbarger County

Consolidated Oil Co. No. 1 Waggoner-BB, S.P.R.R. Sur. A-535. S.S.O. 1,910-18 ft.; testing.
Gibson & Jennings No. 1 Waggoner, sec. 109, H.&T.C. Cur., Blk. 14. Drlg. 1,520 ft.; S.S.O. 1,619-20 ft.; tstg.
F. A. Lain No. 1 J. Coffee, sec. 44, H.&T.C. Sur. O.W.D.D.; drk.
Geo. L. Pace No. 1 Waggoner, sec. 45, H. &T.C. Sur., Blk. 4. Drlg. 2,200 ft.
L. Webb No. 1 Waggoner, sec. 49, H.&.T. C. Sur., Blk 2. L.S.O. 2,406-28 ft.; tested wtr.; S.D.O.; recmtg. csg.

Wise County

Latex Oil Co. No. 1 C. R. Smith, J. Couch Sur. A-104. Drlg. 2,165 ft.

Young County

Ambrose & Meyers No. 1 Brogden, T. C. Wadley Sur. A-2309. Loc.
F. W. Bennett No. 1 T. E. Mathews, I. Hughson Sur. A-2162. U.R. 2,400 ft.
Collins & Fitzwater No. 1 J. G. Castleman, sec. 72, T.E.&L. Sur. Drlg. 510 ft.
H. J. Cox No. 1 W. T. Donnell, J. M. Smith Sur., sec. 1-7-1879. Drlg. 1,300 ft.
D. P. Kenyon No. 1 J. W. Daws, T.E.&L. Sur. 752. Drlg. 1,400 ft.
C. A. Lupton et al No. 1 Hall, B. R. Aiken Sur. A-2241. Drlg. 3,950 ft.
Pitzer & West & Lion No. 1 Mrs. F. Wray, T.E.&L. Sur. 3411. Drlg. 2,900 ft.
T. G. Shaw Oil Corp. No. 1 J. L. McLaren, sec. 6, B.B.&C. Sur. 9-29. Drlg. 1,100 ft.
C. V. Welch No. 1 Street, M. E. Criswell Sur. A-1772. Tstg. S.S.O. 3,380-88 ft.
Yorktex Pet. Co. No. 1 W. E. Steele, I.R.R. Sur. A-156. Fishing 1,600 ft.
H. Zweifel No. 1 E. S. Graham, B.S.&F. Sur. A-44. Loc.
H. Zweifel No. 1 R. D. Sewell, M. Case Sur. A-1402. Drlg. 600 ft.

WEST TEXAS WILDCATS

Andrews County

M. S. Forgeron et al No. 1 Lockhart & Brown, C NE¼ sec. 20, Blk. A-41, P.S.L. Sur. R.U.
Sinclair Prairie Oil Co. No. 1 Emma Cowden, sec. 11, Blk. 44, Twp. 2n, T.&P. Sur. Loc.
G. F. Getty, Inc., No. 1 R. H. Lindley, sec. 8, Blk. A-46. Drlg. 4,890 ft.
Hargrove et al No. 1 Riordan, NW¼, sec. 10, Blk. A-44, P.S.L. Sur. S.D. 216 ft. to R.U.R.
Landreth Prod. Co. No. 1 L. Jones, sec. 11, Blk. A-42, P.S.L. Sur. Drlg. 1,626 ft.
Standard of Texas No. 1 Gray Estate, sec. 21, Blk. A-42, P.S.L. Sur. T.D. 4,209 ft.; testing.

Bailey County

E. L. Wilson et al No. 1 Blank, Labour 4, Abner Taylor League 700. R.U.R.
J. C. Hill et al No. 1 Ely, sec. 38, Blk. 71, P.S.L. Sur. Cellar.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. S.D. 4,026 ft
Storey No. 1 Wilson. Drlg. 1,975 ft.

Cochran County

Bond & Harrison No. 1 Cameron, Labour 1, League 85, Greer Co. School Lands. R.U.S.T. 4,515 ft.
Pete Wiggins et al No. 1 C. Slaughter Dean, C Lab. 26, League 92, Lipscomb Co. School Ld. Loc.

Coke County

H. E. Ogden et al No. 1 Rawlins. Drlg. 147 ft.
Plymouth Oil Co. No. 1 Mrs. Mary Hanna, sec. 252, Blk. LA, H.&T.C. Sur., 1½ mi. SW of Blackwell. T.D. 1,150 ft.; U.R. csg.

Crane County

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Drlg. 4,645 ft.
Sinclair Prairie Oil Co. No. 1 University, sec. 13, Blk. 35. T.D. 3,615 ft.; acidized; testing.

Crockett County

Superior Oil Co. of Calif. No. 1 J. S. Todd, C SE¼ sec. 55, Blk. UV, G.C.&S.F. Sur. Drlg. 3,600 ft.

Dawson County

E. L. Wilson et al No. 1 Texas Ld. & Mtg. Co., sec. 45, Blk. M, E.L.&R.R. Sur. Drlg. 2,171 ft.

Edwards County

Dan Auld et al No. 1 Rigsby, sec. 16, Blk. OK, G.C.&S.F. Sur., 15 mi. NE of Rock Springs. S.D. 3,040 ft.

El Paso County

Tri-State Oil Co. No. 1 Kinkel. Drlg. 2,763 ft.

Fisher County

L. A. Daniels et al No. 1 J. J. Nickless. T.D. 2,919 ft.; U.R. csg.
Martin & Brubaker No. 1 Brown, W. E. Richardson Sur., sec. 4, Blk. R. T.D. 3,020 ft.; set csg.
Southern Oil Co. No. 1 Robinson, sec. 172, Blk. 2, H.&T.C. Sur., 2½ mi. NE of Raton. Drlg. 3,315 ft.

Gaines County

Argo Royalty Co. No. 1 Jones. Loc.
A. G. Carter No. 1 A. L. Wasson et al, sec. 48, Blk. AX, P.S.L. Sur. T.D. 3,092 ft.; ele. 3,549 ft.; set csg.
A. G. Carter et al No. 1-B A. L. Wasson, sec. 44, A.X.P.S.L. Sur. Loc.
T. N. Sloan et al No. 1 Barber, NE cor. sec. 19, Blk. A-28, P.S.L. Sur. Drlg. 136 ft.
Wentz Oil Co. No. 1 Dalmont. Drlg. 2,965 ft.

Garza County

S. Caprito No. 1 Post Estate, sec. 230, Blk. 5, K. Aycock Sur. S.D. 3,107 ft.

Hockley County

R. F. Duggan et al No. 1 Yellow House Land Co., cen. Labour 11, League 718, State Capitol Lds. Loc.
Texas Co. No. 1 B. Slaughter, Labour 83, League 38, Zavala Co. Sch Lds. T.D. 5,030 ft.; P.B. to 5,023 ft.; reacidized; flowed 502 bbls. through tubing in 24 hrs.

Howard County

Moore Bros. No. 1 T.&P. Land Trust, sec. 33, Blk. 20, Twp. 1s, T.&P. Sur. Drlg. plug. 2,725 ft.
Shasta Oil Co. No. 1 Cora Echols, sec. 5, Blk. 15, T.&P. Sur. S.D. 2,440 ft.
R. A. Westbrook et al No. 1 G. T. West, sec. 48, Blk. 33, Twp. 1n, T.&P. Sur. S.D. 1,460 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp. 6. Fsg. 3,040 ft.

Loving County

Barnett Pet. Corp. No. 1 W. D. Johnson, sec. 12, Blk. 56, Twp. 1, T.&P. Sur. Loc.
Finley et al No. 1 W. D. Johnson, sec. 24, Blk. 56, Twp. 1, T.&P. Sur. Drlg. 345 ft.
Mason Oil Co. No. 3 Kyle, sec. 20, Blk. 55, Twp. 1, T.&P. Sur. T.D. 3,685 ft.; R.U. machine.
Stanolind O. & G. Co. No. 1 M. Kyle, sec. 20, Blk. 55, Twp. 1, T.&P. Sur. S.D. 3,741 ft.
Woodley Pet. Co. No. 1 Kloh, sec. 21, Blk. 55, Twp. 1, T.&P. Sur. Loc.

Mitchell County

Mitchell O. & G. Co. No. 1 Z. Morrison, sec. 36, Blk. 29, Twp. 1n, T.&P. Sur. Drlg. 736 ft.

Pecos County

Adams & Black No. 1 Masterson, sec. 71, Blk. 10, H.&G.N. Sur. Drlg. 1,431 ft.
Cannon & Cannon No. 1 University, sec. 2, Blk. 20. Drlg. 267 ft.
Dobbs No. 1 University, sec. 30, Blk. 18. Drlg. 310 ft.
Humble O. & R. Co. No. 1 E. M. Gray, sec. 94, Blk 11, G.H.&S.A. Sur.; 5,000-ft. test. Fsg. 3,616 ft.
K. Kimberlin No. 1 Humble-Young, sec. 49, Blk. 10, H.&G.N. Sur. Spudded.
E. R. Minshall No. 1 Banker, sec. 25, Blk. 146, T.&St.L. Sur. T.D. 3,005 ft.; P.B. to 2,974 ft.; fsg.
W. Y. Penn No. 1 Tipton, sec. 85, Blk. 8, H.&G.N. Sur. Loc.
Pinerock Oil Co. No. 1 White & Baker, SE cor. sec. 5, Blk. 207, T.C. Sur. Drlg. 1,800 ft.
S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D. G.C.&S.F. Sur. T.D. 4,910 ft.; M.I. rotary.
Trans-Pecos Oil Co. No. 1 Gallagher, sec. 9-51-10, T.&P. Sur. S.D. 1,410 ft.
Young No. 1 Perry. S.D. 670 ft.

Presidio County

L. C. Brite No. 4 fee, C NW¼ sec. 113, Blk. 12, G.H.&S.A. Sur. No report.
A. H. Main No. 1 Greenlee, sec. 40. Blk. 347, 13 mi. NE of Marfa. No report.

Reagan County

Bahan & Rhodes No. 1 Kloh, sec. 37, Blk. 37, Twp. 5s, T. & P. Sur., NW cor. of county. Drlg. 3,566 ft.
K. E. Sherman et al No. 1 W. E. Friend, SW cor. sec. 3, Wm. Allen Sur. S.D. 20 ft.

Reeves County

Grisham & Hunter No. 1 Montgomery, sec. 1, W. R. King Sur. S.D. 3,870 ft. M.I.S.T.

(Continued on Page 120)

PERSONAL

M. T. HALBOUTY, chief geologist and petroleum engineer, and ALEX R. DEARBORN, JR., land man, both with Glenn H. McCarthy, Inc., Houston, Tex., resigned May 1 to form the Merit Oil Company. Mr. Halbouty is a graduate of A. & M. College and formerly chief geologist and chemical engineer for the Yount-Lee Oil Company.

W. K. WHITEFORD, vice president; H. C. ARNOLD, head of the land department, and H. A. THOMPSON, of the land department of the British American Oil Producing Company, are in Denver, Colo., from Tulsa and will look over the Rocky Mountain development.

R. L. MINKLER, assistant to the president, General Petroleum Corporation, discussed financial statements of special interest to executives at the monthly meeting of the Los Angeles Petroleum Accountants Society, of which ROY H. HORNIDGE of Union Oil Company is president.

RALPH O. DIETLER, of Tulsa, vice president of the Stanolind Pipe Line Company, is on a visit to his old home in Denver, Colo.

GEORGE A. DOBBIE, of Galt, Ontario, was recently elected to the directorate of the British American Oil Company of Toronto.

W. V. HOWARD, consulting geologist, Tulsa, will be away from his office for another week on professional trip to Texas and Chicago, Ill.

D. A. SYKES of Baroid Sales Company, Tulsa, is in Michigan and Pennsylvania oil fields on company business. He expected to be away for a month.

ERNEST MERRILL, petroleum engineer of Shell Oil Company at Long Beach, recently left Los Angeles for the Hague, but will visit Shell Oil Corporation holdings in the Mid-Continent.

RAY LEWIS, scout for the Stanolind Oil & Gas Company, at Amarillo, Tex., has been transferred to Casper, Wyo.

PAT O'BRIEN, with the Gulf Oil Corporation at Wickett, Tex., was married to MISS MARY VERGIE CARR, of Monahans, in that city on April 22.

HESEN ORMAN, mechanical engineer, who has been working in the Tulsa office of Petroleum Engineers, Inc., is being transferred to the Rodessa, La., area.

S. D. JACKSON, Shreveport, La., and brother, W. J. JACKSON, formerly of Houston, Tex., have formed the consulting, mechanical and petroleum engineering firm of Jackson and Jackson in Shreveport.

MR. and MRS. O. S. PETTY, of San Antonio, Tex., announce the arrival of an 8-pound boy, OLIVE SCOTT PETTY, JR. Mr. Petty is president of the Petty Geophysical Engineering Corporation, San Antonio.

E. E. FINEFROCK has gone with Helmerich & Payne, Inc., drilling contractors, as assistant to O. D. WILLIAMS and will be located in Tulsa. He recently resigned as sales manager of the Murray Tool & Supply Company.

JOHN GOLL, senior member of the firm of Goll, Graves and Mechling, Inc., of Saginaw, Mich., which opened the southeastern sector of the Buckeye Township, Gladwin County field, has been confined to his home in Saginaw by illness.

JUDGE JAMES W. FINLEY, general counsel for the Empire companies at Bartlesville, Okla., will retire, effective June 1. He plans to move to Denver, Colo. Judge Finley spent 10 years on the district court bench at Chanute, Kans., and 8 years in the Kansas senate. He has held his present position since 1926.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Mid-Continent grades were advanced 2 cents, the seventh advance since the first of the year, 16 cents in all, to 66 cents a barrel.

What was intended for the deepest hole in the world was being drilled by William Seymore Edwards on Slaughter Creek, West Virginia. It was then at 5,230 feet.

E. R. Perry was reelected president, H. F. Sinclair vice president, and J. A. Hull secretary-treasurer of the Oklahoma Oil and Gas Producers Association at the annual meeting. The membership fee assessed on production was changed to a fixed rate and a drive for new members begun.

F. H. Oliphant, Standard Oil Company geologist, who had prospected in all parts of the world, died suddenly on a train between Pittsburgh and Oil City, Pa.

20 YEARS AGO

What was believed to be the richest find of oil sand discovered up to that time in Ventura County, California, was tapped at 2,200 feet by Shell Oil Company No. 1 Hartman, producing 56 gravity.

The Garber pool, in Garfield County, was the most prominent of the week in Oklahoma owing to the completion of a large producer in the shallow sand.

Calvin N. Payne, of Titusville, Pa., vice president of Magnolia Pipe Line Company, was in Tulsa on a visit of inspection of his interests in the Southwest.

Kentucky was the most active in the Central West area, Kentucky and Tennessee completing 109 wells during the month.

10 YEARS AGO

Seminole hit the record to that time of any high grade oil producing field with 363,656 barrels and Oklahoma reached 732,000 barrels. The peak at Cushing came in the same month in 1915 with 287,000 barrels.

Floods shut off the Standard of Louisiana line from Smackover, overwhelmed the Monroe gas field and reduced operations in North Louisiana and Arkansas to a minimum.

Viscount Cowdray, founder of the Pearson interests in Mexico, died at his home in Scotland, aged 71.

BURTON HARTLEY, consulting geologist of Houston, Tex., has recently made a trip through South Mississippi checking on recent developments there.

MR. and MRS. CHESTER D. WHORTON are the proud parents of a baby girl, MARY LOUISE, born April 28, in the Olean General Hospital, Olean, N. Y.

A. J. REISSEL, engineer, with the Oklahoma City, Okla., office of the Schlumberger Well Survey Corporation, is spending a three months' vacation at Lyons, France.

E. L. SMITH, independent oil operator of Mexia, Tex., was unanimously elected president of the East Texas Chamber of Commerce at the eleventh annual convention.

J. M. CONSIDINE, vice president of the Marshalltown Manufacturing Company, Marshalltown, Iowa, was in Tulsa the past week, investigating the market in the oil industry for gauges.

P. W. ANDERSON, Wichita, Kans., geologist and oil operator, was a business visitor in Tulsa last week. He has interests with the Vaccars Corporation in the Whelan area, Barber County, Kansas, now being developed by the Olson Drilling Company.

HERMAN HERZOG, JAMES FISHER and ARTHUR STEPHENS, formerly of the Schelling Oil & Gas Company, are now president, vice president and secretary-treasurer, respectively of the Denver Oil Company, of Isabella County, Central Michigan.

J. A. BUCHER, of Bolivar, N. Y., well known independent operator in the Pennsylvania and New York fields and vice president of the Crude Oil Corporation of America, spent the past week visiting the fields in the Southwest and the offices of the corporation in Tulsa.

PARAGRAPHS

THEODORE PATRON, of Moreni, Rumania, and GEORGHE MANOILESCU, of Ceptura, Rumania, petroleum engineers with the Standard Oil Company of New Jersey's Rumanian subsidiary, have been transferred from a tour of observation and study with the Carter Oil Company in Oklahoma to a tour of the properties of Humble Oil Company in Texas, which will continue until the end of the year when they will return to Rumania. Since the first of 1936 they have been with the Carter organization and the Oklahoma Pipe Line Company at Oklahoma City, Fittstown, Burbank, Seminole, Wilson and Ardmore. Mr. Patron is a graduate mining engineer from the Polytechnic of Bucharest; Mr. Manoilescu is a graduate of Polytechnic of Austria. DUNITRIE PANTAZI and HORATIU DUMITRESCU, who have been on a similar tour with the Humble Oil Company in Texas since the first of 1936, are being transferred to Oklahoma.

MAJOR G. G. HOWARD, of Winnipeg, Manitoba, was in Edmonton, Alberta, recently on business.

H. W. SMITH, formerly of Petrolia, Ontario, who has been with the Tropical Oil Company at Barranca-Bermeja, Colombia, has been transferred to San Fernando, Trinidad.

PAUL BARTON, of the Sun Oil Company, and first president of the California Natural Gasoline Association, recently spent a week in Los Angeles but subsequently returned to his office in Philadelphia, Pa.

W. J. MacINTYRE, of Shreveport, La., has been promoted to manager of the Arkansas - Louisiana Gas Company in North Louisiana, East Texas, and Southern Arkansas. He succeeds PAUL F. McBRIDE, deceased. After attending Steven Institute of Technology at Hoboken, N. J., he graduated from the University of Colorado with a B.S. degree in mechanical engineering.

R. L. MERRILL, district manager, and H. E. GALBRAITH, sales representative, of Lucey Products Corporation, Shreveport, La., attended the company's general sales meeting in Tulsa May 1.

ROY GREEN is the new gas engineer in the Amarillo, Tex., district for Phillips Petroleum Company, succeeding R. H. CLARK, recently transferred to the company's offices at Bartlesville, Okla.

A. C. HORNADAY and E. A. KEELER, geologists, and R. C. CURD, scout for the land department of the Phillips Petroleum Company, have been transferred from Breckenridge to Wichita Falls, Tex.

JOSEPH DRURY, who has been engaged with M. F. WHITEHILL, of Washington, Pa., in Beaverton Township, Gladwin County, developments in central Michigan, is visiting relatives in Pennsylvania.

WILLIAM O'BRIEN, JR., of Washington, Pa., last week visited central Michigan where he named C. T. HASKINS Michigan representative of the O'Brien Steel Construction Company, rig supply house.

G. C. MADDUX, geologist, Carter Oil Company, Oklahoma City, Okla., is being transferred to the Ponca City, Okla., office. BRUCE CURRY, geologist, has been transferred from Wilson, Okla., to Oklahoma City. LOY E. HARRIS, geologist, has been transferred from Oklahoma City, to Wilson, Okla.

WILLIAM L. GOMORY, technical and patent counsel for Process Management Company, has returned from Europe and has established headquarters in New York City. For the past 11 years, Mr. Gomory has been supervising and directing the prosecution of patent matters and patent litigations pertaining to cracking, in Europe, from his heaquarters in Paris, France.

Rose From the Ranks

Ralph W. Gallagher, elected last week vice president of Standard Oil Company of New Jersey, succeeding the late C. O. Swain, is an addition to this company's long list of high officials who have come up through the ranks. Mr. Gallagher has been a member of the Standard of New Jersey's "big board" since 1933, when he assumed general supervision of the company's natural gas interests.

RALPH W. GALLAGHER

Mr. Gallagher's business life was started in November, 1896, as an "assistant engineer" in Olean, N. Y., for the New York Transit Company. He often jokes about his first title and the quotation-marks are used with his approval. He laughingly confesses that his duties as "assistant engineer" in 1896 frequently had to do with operating the power end of a broom and other odd jobs. From 1896 there followed several years as sub-oiler, oiler, assistant engineer, tank gauger and field roustabout for the New York Transit, National Transit and United Pipelines.

In 1900 Mr. Gallagher was transferred to Akron, Ohio, as shop foreman for the East Ohio Gas Company, then to Canton, Ohio, to work on a parallel line which the company was laying from the Ohio River to Akron. Later he acted as general foreman and paymaster when the gas lines were extended to Cleveland in 1902, moved up as superintendent of main lines outside of that city and in 1908 was called to Cleveland by M. B. Daly as superintendent of the East Ohio system. He became general superintendent of all city plants and main lines of the company and after that a director. His next promotion was to manager and vice president, and when Mr. Daly died in 1926 he succeeded to the presidency. He remained as president of the East Ohio Gas Company until he was called to New York in 1933.

LYON F. TERRY, petroleum engineer, Chase National Bank, New York City, is on a month's tour of the Mid-Continent oil fields.

E. H. SWEARINGEN, special representative for Bridgeport Machine Company, opened district offices in Shreveport, La., recently.

REID HODGSON, engineering department, George S. Mepham Corporation, has recently been transferred from Ada to Oklahoma City, Okla., and was a visitor to Tulsa last week.

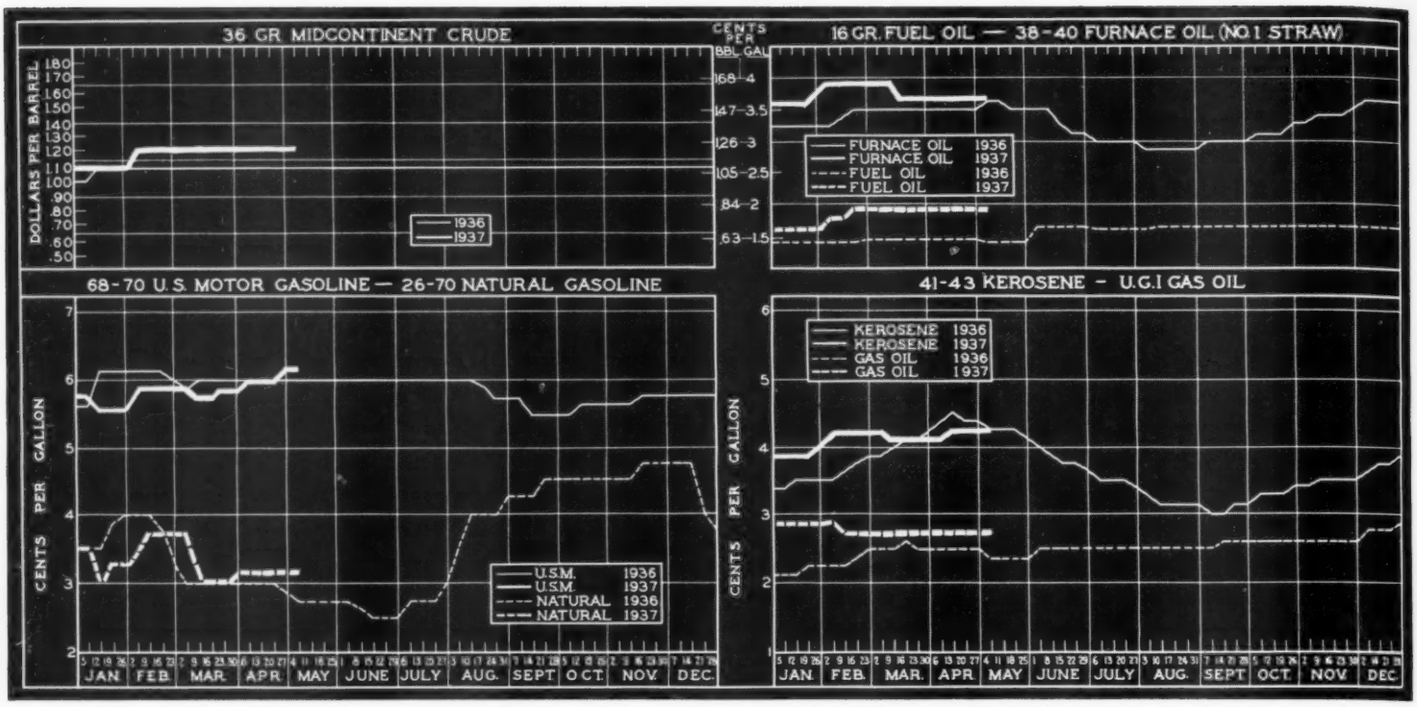
MISS ANNA D. WHALEN, secretary to J. P. D. HULL, business manager, American Association of Petroleum Geologists, Tulsa, was elected president of Tulsa Town Club recently.

W. R. BOYD, JR., executive vice president of the American Petroleum Institute, New York, will be the principal speaker at the National Oil Scouts convention to be held at the Baker Hotel in Dallas, Tex., on June 25 and 26.

BEN E. LINDSLY, Security and Exchange Commission, Washington, D. C., is making a trip out of Tulsa office of the commission to Oklahoma City, Okla., and several cities in Texas and will return to Tulsa before going back to Washington, D. C.

C. W. DELANCEY, assistant division superintendent for the Gulf Coast division for the Humble Oil & Refining Company, has been granted temporary leave of absence and has been relieved by H. H. SPAIN, district superintendent for the Dickinson district.

GEORGE W. HOLLAND, director of the petroleum conservation division of the department of the interior, and J. W. STEELE, chairman of the Federal Tender Board, at Kilgore, Tex., returned to Washington, D. C., to appear before the house subcommittee studying the Connally act.



Representative Mid-Continent Quotations on Crude Oil and Refined Products. Basis Oklahoma (Group 3)

Gasoline Firmer in Group 3, but Still Awaiting Better Driving Weather

By T. F. SMILEY

Price movements throughout the whole list of oil products were negligible in the Group 3 territory in the past week, though varying conditions imparted a firmer tone to some groups and an easier one to others. Gasoline was gaining strength, but not in such a degree as to carry quotations to higher levels. Kerosene and the tractor fuels were not as vigorous as they were a week ago. Industrial fuels were in better position. The heating oils had no difficulty in finding outlets, notwithstanding the fact their season is waning.

Fail to Hit Spring Stride

Unfavorable motoring weather in parts of the Middle West and North has prevented gasoline sales from hitting their spring stride, but in spite of this handicap demand is broadening and tank-car prices this week were sturdy. East Texas was sold up. No refiner with third-grade material eligible for federal tenders was letting it go under 5¼ cents f.o.b. East Texas. Incidentally this was $3 a car more than it would bring at 5⅜ cents on a Group 3 basis. Refiners in that area are experiencing pronounced trouble in getting crude. Some whose plants are shut down would resume operations if they could get the needed crude supplies.

The trade generally continued to express confidence that the 1937 motoring season would witness big gallonage records, though the enthusiasm of some observers was tempered by the fact that "protection" buying played so large a part in building the present robust market. They point out that big gasoline purchases by major refiners in recent months were prompted, not by any clearly seen need, but by a desire to guard against embarrassment which might grow out of inadequate crude sources, labor difficulties, a sudden rise in demand from overseas or some other emergency. If none of these exigencies develop the motor fuel stored as a safeguard will have to be liquidated at some time in the future. There seems to be no reason for fearing these stocks may prove a market depressant in the 1937 touring season.

Efforts on the part of buyers to get naphtha for blending purposes met with scant success. It is a common practice to raise the antiknock value of third-grade U. S. Motor material by mixing naphtha with it, more particularly when gasoline prices are at or near an unprofitable level. Following the advance in crude prices last January many refiners declared they were unable to make gasoline at a profit. During that period it is believed naphtha stocks were drawn on heavily, with the result that the product now is hard to find. Buyers said they found limited supplies in North and West Texas. Few Oklahoma refiners make naphtha, largely because the market for it is so erratic.

Heavy snow in northwestern Iowa and western Minnesota and rain in the Middle West curtailed plowing operations to such an extent that the demand for kerosene and tractor distillates softened appreciably, though prices held. A few pleasant days should restore the brisk market for both.

Heating Oils Getting a Play

Weather conditions which interfered with motoring and farm operations stimulated the sale of heating oils, which were in such demand in some areas that Oklahoma tankcar prices stiffened. Industrial gas oil and fuel oil were firmer, with refiners reporting increased inquiries. Some of this livelier demand was attributed to expanded industrial operations.

The whole lubricant group was firm, with bright stocks especially strong. Stocks in refinery tanks were reported much below those of a year ago. Steady demand for natural gasoline was taking all the current output. Oklahoma inventories showed signs of piling up late last week, but enough buying appeared to remove danger of serious surplus. Prices were unchanged in both Oklahoma and Texas. Wax movement was satisfactory, with no change in quotations.

Refined Oil Market Barometer

Gasoline consumption is broadening as additional regions open up to pleasure driving. Snow or rain in northern and middle-western areas kept demand from rising to higher levels in the past week. Industrial fuels were stronger. Kerosene and tractor fuels were easier as a result of plowing operations being delayed by weather conditions.

MID-CONTINENT. Gasoline firmer. Fuel oil and gas oil improved. Kerosene easier.

EAST COAST. Fuel oil up. Gasoline stronger. Effort to revive gasoline tax causing uneasiness.

GULF COAST. Gas oil and motor fuel extremely strong. Kerosene off.

CALIFORNIA. Fuel oil and gas oil steady. Gasoline improving.

PENNSYLVANIA. Lubricating oil market tight, with neutrals particularly strong.

CHICAGO. Gasoline demand rising, but retail conditions somewhat spotty. Gas oil firm.

Higher Price Commanded by Gasoline and Fuel Oil in Eastern Territory

By H. STANLEY NORMAN

NEW YORK, May 4. — Higher fuel oil prices quoted by practically all refiners in the northeastern territory, along with increased quotations for spot gasoline and Bunker C grade sales in New York harbor, were high points of the past week's marketing developments. The fuel oil price advances were slightly erratic so far as individual companies are concerned, but generally speaking the entire list of products was advanced a quarter to three-eighths of a cent a gallon. Some refiners applied their increases to only three or four grades, leaving others at previous levels. However, the products neglected on the lists of a few were included by others, indicating that the entire list will be affected after the leveling-off process is applied.

Mounting transportation costs from Gulf Coast to north Atlantic ports are the element chiefly responsible for the fuel oil tankcar price increases, which are contrary to seasonal expectancy. Furthermore, several small refiners have contracted their entire summer fuel oil production to refiners in position to hold the stocks for next winter consumption. Increased industrial demand and the growing number of domestic units now on a continual operating basis for water-heating and cooking purposes indicate that the seasonal depression in consumption of fuel oil will be less pronounced this summer than in the past.

Chiefly responsible for the counter-season increase in fuel oil prices, however, are the continued high tanker rates asked by owners for Gulf Coast movement to Atlantic Coast points. In advancing the prices on fuel oil over the past 10 days, large units on the Atlantic Coast have pointed out that charter rates normally have dipped downward long before this time of the year. They further assert that practically all tanker fixtures are booked for service over the entire summer and that no material reduction in transportation costs north is likely to occur over the season.

Gasoline prices have firmed from .250 to .375 cents a gallon in the New York harbor spot market during the past two weeks. The advances by open market sellers have been gradual and at irregular intervals, but considerable material now moving is at 7.5 cents a gallon for 65-octane grade. Some sellers are still offering 65-octane gasoline at 7.250 and two or three are said to be doing business at 7.125 cents. There has been no change in the tankcar prices quoted by major refiners who are still posting 7.75 cents for their "house brand" motor fuel, which ranges above 70 octane.

Congestion of highways over fair week-ends during the latter half of April is ample evidence that motorists are eating into gasoline stocks accumulated over the winter.

Some of the low retail prices in northern New Jersey are being elevated in line with surrounding territory, indicating that this sore spot may be eliminated soon. Most dealers in Essex and Union counties, New Jersey, are posting 15.9 cents a gallon for "house brand" gasoline, compared with 12.9 cents asked until 10 days ago. The improvement in Hudson and Bergen counties, New Jersey, is apparent in general postings of 17.5 cents for branded material and 16 cents for unbranded. The four New Jersey counties involved in recent adjustments have been the most troublesome spots in the northeastern marketing territory for several weeks. Correction of the northern New Jersey weakness will place retail prices in this section on a fairly stable basis for the early summer improvement in consumption.

Market absorption of cut-price gasoline available in the past in New York harbor probably will contribute increasingly to market stability as summer progresses. Dealers are finding it increasingly difficult to replace their bargain-counter motor fuel stocks at previous prices. There is nothing in prospect to indicate that the laid-down price in New York will move in any direction other than up during the next few months. With existing conditions as a guide, marketers in general are attempting to take advantage of improvement in prices and the heavy consuming season.

Gulf Coast plants, which hold the key to market levels in the Atlantic Coast district, appear to be in full command of the gasoline cargo situation and prices are firm. Price quoted on 64-66, 375-endpoint gasoline on the Gulf Coast is almost uniformly 6.25 cents a gallon, leaving little alternative for North Atlantic dealers but to pass on their increased costs of doing business to the consumer.

Continual drain on the Gulf Coast supply of gas oil by continental buyers is reflected in quotations of 4 cents a gallon now asked by most refiners. Two cargoes of 30-plus translucent gas oil were reported sold on the Gulf Coast last week for late May and June loading at 4 cents a gallon, which is .125 cent above the consideration involved in most of March and April business. Several inquiries from European buyers remain in the market. Normal supplies from Rumania and Russia are not available this year to European buyers in the required volume and much of this business has reverted to Gulf Coast refiners.

There was one cargo of 41-43 water-white kerosene reported sold on the Gulf Coast for export movement at 4.5 cents a gallon, but this was considered a bargain, and traders say this price cannot be duplicated elsewhere. Supporting this assertion is the fact kerosene was among the fuel oils advanced by some major marketers in the New York harbor district last week. More favorable marketing conditions on gasoline and light fuel oils were also reflected in the western Pennsylvania district. U. S. Motor gasoline has staged a sharp recovery in Pennsylvania from the break during the early part of April. It was quoted mostly at 5.375, with some asking 5.50 cents a gallon. Even at the higher prices demand was reported in excess of supply. During the early part of April U. S. Motor in western Pennsylvania dipped to 4.75 cents for a few days, but the bargain price soon attracted sufficient business to absorb the distress material and lift quotations to levels in keeping with other products.

Tightness in the lubricating oil market continued in Pennsylvania, with neutrals getting the biggest play. Bright stocks are slightly less active, but there has been no break reported so far in prices prevailing for the past few weeks. More material is being offered, however, and some observers say a slight downward adjustment may be instituted by those in need of business unless conditions improve.

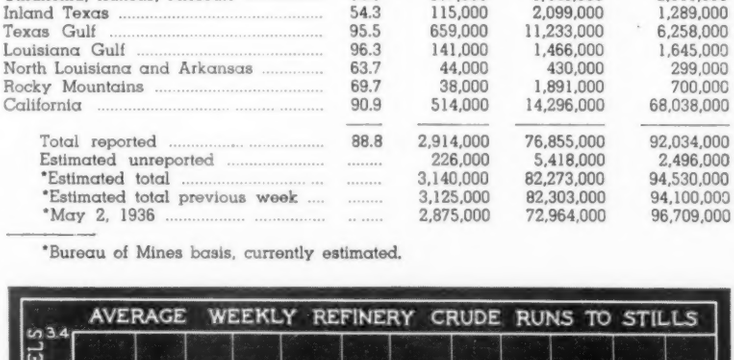
An offering of 26.5 cents a gallon for 25-pour-test, 200-viscosity neutral brought 10 or 12 cars on the market, but buyers had previously shopped diligently for supplies at 26 cents without success. Previous prices ranged around 24.5 to 25 cents for 25-pour-test neutral, 200 viscosity. Other grades of neutral were generally up a half cent a gallon, with demand absorbing all available production.

A. P. I. Weekly Refinery Statistics

Week Ending May 1, 1937

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	550,000	18,747,000	5,817,000
Appalachian	88.4	105,000	2,782,000	543,000
Indiana, Illinois, Kentucky	92.1	441,000	14,463,000	4,534,000
Oklahoma, Kansas, Missouri	84.6	307,000	9,448,000	2,911,000
Inland Texas	54.3	115,000	2,099,000	1,289,000
Texas Gulf	95.5	659,000	11,233,000	6,258,000
Louisiana Gulf	96.3	141,000	1,466,000	1,645,000
North Louisiana and Arkansas	63.7	44,000	430,000	299,000
Rocky Mountains	69.7	38,000	1,891,000	700,000
California	90.9	514,000	14,296,000	68,038,000
Total reported	88.8	2,914,000	76,855,000	92,034,000
Estimated unreported	.....	226,000	5,418,000	2,496,000
*Estimated total	.....	3,140,000	82,273,000	94,530,000
*Estimated total previous week	.....	3,125,000	82,303,000	94,100,000
*May 2, 1936	.....	2,875,000	72,964,000	96,709,000

*Bureau of Mines basis, currently estimated.



Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

April 10, 1937	297,468,000 barrels
April 3, 1937	297,374,000 barrels
April 11, 1936	314,033,000 barrels

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of May 4, 1937

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Dlr.	Inc. tax	tank-wag.
Chicago, Ill.	16 0	14 0	4.0	10.1
Decatur	16 0	14 5	4 0	10 1
Joliet	16 0	14 5	4 0	10 1
Peoria	16 0	14 5	4 0	10.1
Quincy	15 8	14 3	4.0	9.9
Davenport, Ia.	16 0	14 5	4 0	10 1
Des Moines	15 8	14 3	4 0	9 9
Mason City	16 2	14 7	4.0	10 3
Sioux City	16 0	14 5	4 0	10 1
Duluth, Minn.	16 8	15 3	4 0	10 9
Mankato	16 4	14 9	4 0	10 5
Twin Cities	16 4	14 9	4 0	10.5
La Crosse, Wis.	17 4	15 9	5 0	10 5
Green Bay	17 7	16 2	5.0	10 8
Milwaukee	17 3	15 8	5 0	10 4
Detroit, Mich.	15 1	13 6	4 0	9 8
Grand Rapids	16 5	15 0	4 0	10 9
Saginaw	16 3	14 8	4 0	8 5
Evansville, Ind.	17 5	16 0	5 0	†10 6
Indianapolis	17 7	16 2	5 0	†9 6
South Bend	17 9	16 4	5 0	†9 6
Fargo, N. Dak.	17 4	15 9	4.0	11 5
Minot	18 6	17 1	4 0	12 7
Huron, S. Dak.	17 8	16 3	5 0	10 9
Kans. City, Mo.*	15 4	13 9	4 0	8 9
St. Louis*	15 7	14 2	4 0	9 8
St. Joseph*	15 4	11 4	4 0	6 9
Wichita, Kans.	14.9	13.4	4.0	8.9

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Atl'tic City, N. J.	13 0	11 5	4 0	8 0
Newark	12 5	11 0	4 0	8 0
Annapolis, Md.	15 1	13 6	5 0	10 0
Baltimore	14 5	13 0	5 0	8 5
Cumberland	16 9	14 4	5 0	10 0
Wash'g'n, D. C.*	12 5	11 0	3.0	9 0
Danville, Va.	17 7	15 2	6 0	12 9
Norfolk	16 5	14 0	6 0	11 5
Petersburg	16 8	14 3	6 0	11 7
Richmond	16 8	14 3	6 0	11 7
Roanoke	18 0	15 5	6 0	12 9
Charles'n, W. V.	16 3	13 8	6 0	12 6
Parkersburg	15 6	13 1	6 0	11.2
Wheeling	15 5	14 0	6 0	12 2
Charlotte, N. C.	18 9	16 4	7 0	13 6
Hickory	19 4	16 9	7 0	13 0
Mt. Airy	19 2	16 7	7 0	12 8
Raleigh	18 5	16 0	7 0	12 1
Salisbury	19 0	16 5	7 0	12 7
Charleston, S. C.	17 5	15 0	7 0	11.1
Columbia	18 5	16 0	7.0	12.1
Spartanburg	19 2	16.7	7.0	12.9

*Standard of N. J. has discontinued posting service-station prices at all above points except at Washington where a station price of 16 cents is in effect.

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective March 22, 1937, in West Virginia, commercial consumer taking tank-wagon or barrel delivery of 100 gallons or more at one time, 2 cents per gallon over consumer tankcar price in effect at time and place of delivery; less than 100 gallons, 6 cents per gallon above consumer tankcar price.

Effective Jan. 25, 1937, in North and South Carolina and effective Feb. 27 in Virginia, except in Arlington and Fairfax counties: Deliveries of 50 gallons or more by tank-wagon billed at price 2 cents over posted consumer tankcar price in effect at time and place of delivery. Deliveries less than 50 gallons billed at price 6 cents over posted tankcar price. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wag.	Net dlr.	Inc. tax	tank-wag.
Atlanta, Ga.	21 0	18 0	7 0	*13 0
Augusta	18 5	15 5	7 0	*14 0
Macon	21 5	18 5	7 0	*14 5
Savannah	20 0	17 0	7 0	*13 0
Birm'ham, Ala.	21 0	18 0	8 0	12 0
Mobile	22 0	19 0	9 0	11 0
Montgomery	22 0	19 0	9 0	12 5
Jackson, Miss.	21 0	18 0	7 0	*13 0
Vicksburg	20 5	17 5	7 0	*13 0
Jacksonville, Fla.	20 5	17 5	8 0	11 0
Miami	20 5	17 5	8 0	†10 5
Pensacola	22 0	19 0	9 0	12 0
Tampa	21 5	18 5	8 0	11.0
Lexington, Ky.	19 5	16 5	6 0	11.0
Covington	19 0	16 0	6 0	11 0
Louisville	19 5	16 5	6 0	10 5
Paducah	19.5	16.5	6.0	10.0

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Kerosene prices in all states subject to 2 cents discount except in Kentucky where prices are net.

*Includes 1-cent state tax. †Subject to 2-cent discount.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, and Tampa, Fla., have a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank-wag.
Denver, Colo.	17 5	5 0	11 5
Grand Junction	20 0	5 0	15 0
Pueblo	15 0	5.0	10 5
Casper, Wyo.	18 0	5 0	11.5
Cheyenne	18 0	5 0	13 0
Butte, Mont.	19 5	6 0	15.5
Billings	21.5	6 0	15 5
Helena	21 5	6 0	15 5
Great Falls	21 5	6 0	15 5
Salt Lake, Utah	19.5	5 0	16 0
Twin Falls, Ida.	21 5	6 0	18 0
Boise	21 0	6 0	18.0
Albuquerque, N. M.	17.5	6.5	12.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wag. con'r.	Divided dlr.	Inc. tax	tank-wag.
Ohio points	17 5	16 5	5 0	*13 5

*Includes state tax of 1 cent.

Divided dealer price is also price to authorized agents, exclusive of .5 cent rental. Tank-wagon price is price to commercial consumers in deliveries of 25 gallons or more; less than 25 gallons get service-station price.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
San Francisco	17 5	18 5	4 0	11 5
Los Angeles	17 0	18 0	4 0	9 0
Fresno, Calif.	18 5	19 5	4 0	12 0
Phoenix, Ariz.	21 0	22 0	6 0	‡16 0
Reno, Nev.	20 0	21 0	5 0	13 0
Portland, Ore.	20 0	21 0	6 0	13 5
Seattle, Wash.	20 0	21 0	6 0	13 5
Spokane	23 0	24 0	6 0	16 5
Tacoma	20.0	21.0	6.0	13 5

‡Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Albany, N. Y.	14.0	12.5	4.0	7.75
*Met. N. Y.:				
Mann't'n, Br'nx	13.5	12 0	4.0	7.25
Staten Island	13 75	12 0	4 0	7 25
Q'ns & Brklyn	13.5	12 0	4.0	7.25
Buffalo	14.3	12 67	4.0	8.25
Rochester	14.3	12.74	4.0	8 25
Syracuse	14.3	12.7	4.0	8.75
Boston, Mass.	14 0	12.5	4 0	7 50
Portland, Me.	15 8	13 5	5 0	7.75
Manch'ter, N. H.	16 3	14 0	5 0	8.00
Burlington, Vt.	15.9	13.9	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point: Monthly purchases under 5,000 gallons, pay divided dealer tank-wagon price at delivery point.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Philadelphia, Pa.	14 0	12 5	5 0	10.5
Pittsburgh	15.5	13.5	5.0	11.0
Allentown	14.5	13.25	5.0	11.0
Erie	14 5	13 0	5 0	10.0
Scranton	14.5	13 25	5 0	11.0
Altoona	15 5	13.5	5 0	11.0
Dover, Del.	14.5	....	5 0	11.0
Wilmington	13 5	....	5 0	11.0
Springf'd, Mass.	14 8	....	4 0	7.75
Worcester	14 8	....	4 0	8 0
Hartford, Conn.	14 6	....	4 0	7.0
New Haven	14 0	....	4 0	7.0
Providence, R. I.	13.0	....	3.0	7.75

Atlantic has transferred all stations to dealers except in Philadelphia and Pittsburgh where prices are 17.5 and 20.0 cents per gallon respectively.

Price basis to undivided dealers—Dealer tank-wagon less .5 cent per gallon.

Consuming accounts not under contract—when made by tank-wagon in quantities of 50 gallons or over, dealer price.

Commercial accounts under contract—annual consumption 2,500 to 100,000 gallons per year, 1 cent above posted tankcar price; over 100,000 gallons per year, .5 cent above posted tankcar price.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
N. Orleans, La.	20 0	17 5	*10 0	†14 0
Baton Rouge	18 0	15 5	8 0	12.0
Alexandria	18 5	16 0	8 0	12.0
Lafayette	19 0	16 5	8 0	12.5
Lake Charles	19 0	16 5	8 0	12.5
Shreveport	17 5	15 0	8 0	9.5
Knoxville, Tenn.	21 0	18 5	8 0	14.0
Memphis	19 0	16 5	8 0	12.0
Chattanooga	20 5	18 0	8 0	13 5
Nashville	20 0	17 5	8 0	11 0
Bristol	19.75	18.5	8.0	14.5

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax.

Standard of La. has transferred all stations to dealers except in New Orleans and Baton Rouge where station prices are 23.5 and 21.5 cents per gallon, respectively.

Price basis to commercial consumers: Effective Dec. 21, 1936, deliveries of 50 gallons or more in one delivery, posted consumer tankcar price plus 2 cents per gallon; consumers taking deliveries of less than 50 gallons at one time pay posted consumer tankcar price plus 6 cents per gallon.

Louisiana kerosene prices include 1-cent state tax.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Dlr.	Inc. tax	tank-wag.
Omaha	18 4	16 9	6.0	10.4
McCook	18 0	17.0	6 0	10.0
Norfolk	18 8	17.3	6.0	10.8
North Platte	19 2	17.7	6.0	11.2
Scotts Bluff	19.9	18.4	6.0	10.9

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15 7
V.M.&P. naphtha	16 0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank-wag.
Muskogee, Ok.	15 5	5 0	7.0
Oklahoma City	13 0	5 0	8.0
Tulsa	14 0	5 0	6.0
Ft. Smith, Ark.	15 0	5 0	10.0
Little Rock	17 5	7.5	9.5
Texarkana	15.0	5.0	9.0

Texas

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Dallas, Tex.	14 0	18 0	5 0	8.0
Fort Worth	14 0	18 0	5 0	8.0
Houston	14 5	18 5	5.0	8.0
San Antonio	14.5	18.5	5.0	8.0

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Hamilton, Ont.	22 0	....	6 0	17 0
Toronto, Ont.	22 0	24 5	6.0	17.0
Brandon, Man.	29 8	32 8	7.0	22.8
Winnipeg, Man.	28 2	31.2	7.0	20.7
Regina, Sask.	29 5	....	7.0	22.0
Saskatoon, Sask.	32 3	....	7.0	24.8
Edmonton, Alta.	30 5	33 5	7.0	24.2
Calgary, Alta.	28 0	31 0	7 0	21.5
Vancouver, B. C.	22 0	26.0	7.0	23.0
Montreal, Que.	19 0	....	6 0	17.5
St. John, N. B.	24 0	28.0	8.0	18.5
Halifax, N. S.	24.0	28.0	8.0	18.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal when discounts below station prices are one-half cent per gallon less and in Vancouver where discounts are 1 cent per gallon more.

Retail Price Changes

Standard Oil Co. of Ohio April 29 advanced tank-wagon and station gasoline .5 cent throughout Ohio; May 5 reduced prices .5 cent at all Ohio points. The latter change is not shown in the price table.

1937 Petroleum Directory

The World Petroleum Directory, 1937 Edition, is off the press and distribution for the Mid-Continent is being handled through Dudley W. Moore, P. O. Box 1821, Tulsa.

This book has more than 1,200 pages in the current edition, with a total of 35,000 changes, 10,000 since the previous edition in 1936. Listings of companies show officers of companies, individual names, financial setup, organization data, department heads and addresses, production data, location of fields, plants and lines. There are special lists of exporters, royalty companies, drilling contractors and oil associations. A complete foreign section is carried. Information reports are given on all listings. The book sells for $10.00 a copy delivered.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of May 4, 1937

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below (3d gr.)	.05⅛	.05⅜
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06¼
60-62 400 grades:		
62 oct. and below (3d gr.)	.05⅛	.05⅜
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06¼
64-66 375		.05¼
68-70 360	.05⅜	.05½

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.05⅛	.05⅜
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06¼
60-62 400	.05⅛	.05¼
64-66 375	.05⅛	.05¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:	
62 octane and below	.05⅝
63-67 octane	.05⅞
68-70 octane (regular)	.06⅜

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:	
62 octane and below	.05½
63-67 octane	.06¼
68-70 octane (regular)	.06½

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.05⅛	.05¼
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06¼
60-62 400 grades:		
62 octane and below	.05⅛	.05¼
63-67 octane	.05½	.05⅝
68-70 octane (regular)	.06⅛	.06¼
64-66 375	.05⅛	.05¼
68-70 360	.05¼	.05⅜

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:	
Below 60 octane	.05½
60-64.9 octane	.06¾ .07
65-70 octane	.07 .07¼
64-66 375	.05⅝
68-70 350	.05⅞

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07½ .08½
58-60 400, 65 oct. and higher	.08¼ .09¼

EAST COAST (domestic)—

U. S. Motor below 60 octane:	
*New York (Bayonne)	.06¾
Baltimore	.06¾
U. S. Motor, 60-64.9 octane:	
*New York (Bayonne)	.07
Philadelphia	.07 .07¼
Boston	.07¼
Baltimore	.07 .07¼
Charleston, S. C.	.07¼
U. S. Motor, 65 and above:	
*New York (Bayonne)	.07¼
Philadelphia	.07¼ .07½
Boston	.07½
Baltimore	.07¼ .07½
Charleston, S. C.	.07½

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05¾	.05⅞
60-64.9		.06⅛
65 octane and higher	.06¼	.06⅜

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05⅜
52-54 450 (blending)	.05⅜
54-56 450 (blending)	.05⅝

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70	.03⅛	.03¼
Grade 18-55		.03¾

NORTH TEXAS—

Grade 26-70		.03¼
Grade 18-55	.03⅞	.04

CALIFORNIA—

75-85 375-390	.06¾	.07½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.03⅝	.03½

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.04¼	.04⅜
41-43 gr., 300-350 i.b.p., 110-125 flash, 500-520 e.p.	.04⅜	.04½
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04⅞	.05

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04¼	.04⅜
42-44	.04⅜	.04½

NORTH TEXAS—

41-43	.04⅜

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.04⅜	.04½

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04¾

PENNSYLVANIA (inland refineries)—

45	.04⅝
46	.04¾
47	.04⅞

CHICAGO (Based on Group 3)—

41-43	.04¼	.04¼
42-44	.04⅜	.04½

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04	.05

NEW YORK (Bayonne, N. J.)—

41-43	.05½

***GULF COAST (domestic)—**

41-43	.04¼	.04¾

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03⅞	.04
No. 1 straw, 38-40	.03⅝	.03⅞
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03⅜	.03½
No. 3, zero to 15, 28-32	.03¼	.03⅜
No. 3, 15 and above, 28-32	.02½	.02¾

NORTH TEXAS—

No. 1 prime white, 38-42		.04
No. 1 straw, 38-40	.03⅝	.03⅞

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03½

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03⅝	.03¾

CHICAGO (based on Group 3)—

No. 1 prime white, 38-40	.03⅞	.04⅛
No. 1 straw, 38-40	.03⅝	.03¾
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03⅜	.03½
No. 3, zero to 15, 28-32	.03⅜	.03½
No. 3, 15 and above, 28-32	.02⅝	.02¾

NEW YORK (Bayonne, N. J.)—

*No. 1	.05¾
*No. 2	.05⅝
*No. 4	.05⅛

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02¾	.03
No. 4, low cold test, 24-28	1.10	1.15
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.87½	.92½
Below 18 fuel oil, industrial	.80	.87½

NORTH TEXAS—

U.G.I. gas oil	.02¾	.03
No. 4, low cold test, 24-28	1.10	1.15
No. 5, low cold test, 18-22	.87½	.92½
Below 18 fuel oil, industrial	.80	.85

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.80 .85

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.70

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02¾	.03
No. 4, low cold test, 24-28	1.10	1.15
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.87½	.92½
No. 6, low cold test, 10-16	.80	.85

PENNSYLVANIA (inland refineries)—

36-40	.04⅝	.04½

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.10	1.25
24 plus diesel, per bbl.	1.10	1.25
24 plus diesel (bunkers)	1.15	1.35
12-16 (bunkers at tidewater)	.90	1.00
10-16 (cargo lots)	.75	.95
12-17 (tankers)	.75	.95
San Joaquin Valley:		
10-18 (tankcars)	.70	.90
24 plus diesel, per bbl.	1.00	1.35
San Francisco:		
27 plus diesel		1.40
24 plus diesel (bunkers)		1.40
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03⅞	.04⅛
28-30 diesel (bunkers)	1.65	1.90
Bunkers (bulk cargoes)		.95
Bunker C (bunkers)		1.00

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil	.04¾
28-30 diesel (lighterage 6¼c per bbl.)	2.10
28-30 diesel (tankcars)	.04¾
*Bunker C (to ocean-going ships in N. Y. harbor)	1.20
Industrial fuel (tankcars)	.04½

*Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:	
190-200 D, 15-25	.23
150-160 D, 0-10	.20
150-160 D, 15-25	.19½
150-160 E, 15-25	.19
100-110 D, 0-10	.18
Steam refined:	
631 green (treated)	.17½
600 dark green (untreated)	.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 145-50 at 210, 540-550 flash):	
10 pour test	.28 .28½
15 pour test	.27 .27½
20 pour test	.26 .26½
25 pour test	.25 .25¼
Steam refined:	
600	.17
650	.19
600 Pennsylvania flash	.20
630 flash	.24
600 Warren E filtered	.20

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:	
150-3	.09
180-3	.10
180-4	.09½
200-3	.10½
200-4	.10
250-3	.11½
250-4	.11
280-3	.12½
280-4	.12
300-3½	.13
400-3½	.14
100-2½ paraffin oil	.05¾
15-20 Cold Test:	
200-3	.10
200-4	.09½
250-3	.11
250-4	.10½
280-3	.12
280-4	.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07¼
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08⅝	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6		.07
300-5-6	.07¼	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3	.07	.08
200-2½-3	.07	.08
300-2½-3	.07	.08
400-3-4	.09	.11
540-3-4	.09	.11
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07	.08
300-5-6	.07	.08
350-5-6	.10½	.11½
400-5-6	.10½	.11½
450-5-6	.10½	.11½
500-5-6	.10½	.11½
600-5-6½	.10½	.11½
700-6½ plus	.10½	.11½
750-6½ plus	.10½	.11½
900-6½ plus	.10½	.11½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.24½	.25
10 pour test	.23½	.24
15 pour test	.23	.23½
25 pour test	.22	.22½
180 vis. at 70° F., 3 color:		
25 pour test	.25	.25½
200 vis. at 70° F., 3 color:		
Zero pour test	.29	.29½
10 pour test	.28	.28½
15 pour test	.27½	.28
25 pour test	.26½	.27

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02¾

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0265	.0270
124-126 (a.m.p.) w.c. scale	.0270	.0275

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0250	.0255
124-126 (a.m.p.) y.s.	.0260	.0265
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.05¾
60-62 400		.05⅝
61-63 390	.05⅞	.06
64-66 375	.06⅛	.06¼

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¾
55-65 octane	.04¾	.05
65-67 octane		.05
67-69 octane		.05⅛
Above 69 octane	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white	.04½	.05
41-43 water white	.04½	.05
44 water white	.04¾	.05

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.26½	.27
600 S.R. unfiltered		.24
630 S.R. unfiltered		.25½
600 flash, S.R.		.26½
630 flash, S.R.	.32	.32½
Bright Stocks:		
8 color	.32	.32½
6½ plus color in dilution		.31½

NEUTRAL OIL

200-3 color	.32½	.33
150-3 color	.29	.29½

PARAFFIN WAX

NEW YORK (prices per pound)—

123-126 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0260	.0270
124-126 y.s.	.0245	.0250

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 28, 1937)

East Texas*	$1.27
Van, Tex.†	1.10
Camp Hill, Tex.	1.27
Cass County, Tex.‡	1.25
Talco	.73
Altus and Tipton, Okla.§	1.20
Other fields (see gravity table).	

*All companies. †Humble Oil & Refining Co.; Pure Oil Co. ‡Texas Co. §Gulf Oil Co. Talco by Humble Oil & Refining Co.

West Texas

See gravity table.

Pecos County*	.91
Pecos shallow†	.81

*Shell Petroleum Co., Gulf Pipe Line Co., and Humble Oil & Refining Co. †Shell Petroleum Corp.

Gulf Coast

(January 28, 1937)

Choctaw and Darrow, La. See note below	
Clay Creek, Tex.	$1.00
Garden Island, La.	1.37
Cleveland, Tex.	1.27
Hardin, Tex.	1.15
Tomball, Tex.	1.30
Lafitte, La.	1.24
Livingston, Tex.	1.27
Satsuma	1.20
Heyser, light (Nov. 1, 1936)	1.15
Heyser, heavy (Nov. 1, 1936)	.90
Placedo (Nov. 1, 1936)	.90
Welsh, La.	.98
Tepetate (La.) (Jan. 4, 1937)	1.12

Greta, Refugio, O'Connor, McFadden, Saxet, Segno, Taft, Tomoconnor and Plymouth take same gravity prices as Gulf Coast, Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields take Mirando gravity prices. Jennings, La., 5 cents lower than Gulf Coast prices on each degree. Segno, Texas, takes Gulf Refining Co.'s Gulf Coast prices. Choctaw and Darrow, Louisiana, posted for first time by Standard Oil Co. of Louisiana, start below 21 degrees at 90 cents, with 3-cent differential up to 25 gravity, then 2-cent differential up to 40 and above, $1.36.

Rocky Mountain States

(Effective January 28, 1937)

Iles, Colo., light*	$1.18
Iles, Colo., heavy*	1.12
Greybull, Wyo.*	1.30
Torchlight, Wyo.*	1.30
Grass Creek, Wyo., light.*†	1.30
Grass Creek, Wyo., heavy (Nov. 4, 1936)*†	.62
Hamilton Dome, Wyo. (Nov. 4, 1936)*	.57
Elk Basin, Wyo., light*†	1.30
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light	.82
Hogback, N. Mex.*	1.33
Pondera, Mont. (Jan. 26, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.23
Rock Creek, Wyo.†	1.20½
Lea County, N. M. (see West Texas gravity table).	
Artesia, N. Mex.	.90
Maljamar, N. Mex.	.90
Canon City and Florence, Colo.	1.10
Florence, Colo.	.98
Lance Creek, Wyo.	.97
Sunburst, Mont. (June 5, 1936)	1.20
Cat Creek, Mont.	1.40
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Middle Western States

OHIO OIL CO.

(Effective January 28, 1937)

Lima	1.25
Illinois	1.35
Princeton, Ind.	1.35
Midland, Mich.	1.42
West Branch, Mich.	1.26
Buckeye (March 16, 1937)	1.39½
Arenac, Mich.	1.26
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River	1.42
Kentucky River	1.50
Western Kentucky	1.40

Midland, Mich., price posted by Simrall Corp. and Pure Oil Co. includes Greendale, Porter, Beaverton, Crystal and equal grades. West Branch and Arenac by Simrall Corp., effective January 29. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Buckeye posted by Simrall Corp. and Pure Oil Co.

Southwest Texas

(January 28, 1937)

Pettus	1.37
Salt Flat, Darst Creek, Hilbig, Carroll Clark, Zoboroski	1.09
Luling	1.00
Lytton Springs	1.12

Saxet and Taft take same gravity table as Gulf Coast.

North Louisiana and Arkansas

Smackover, all grades	$.90
Tullos and Urania	1.02
El Dorado East field	.90
Union County, Ark.	.90
Ouachita County, Ark.	.90

Eastern States

TIDE WATER PIPE LINE CO.

(Effective Feb. 24, 1937)

Bradford, Pa.	$2.67
Allegany, N. Y.	2.67

SOUTH PENN OIL CO.

(Effective Feb. 24, 1937)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.67
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.42
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.37
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.22
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Sept. 18, 1936)	1.32

PENNZOIL CO.

(Effective Feb. 24, 1937)

Pennsylvania Grade Oil in National Transit Lines:	
Group A Includes Cochran, Franklin, Hamilton and Doolittle districts.	2.67
Group B Includes Tidioute district.	2.66
Group C Includes Turkey and Tidioute districts.	2.65
Group D Includes Bear Creek and Porkey districts.	2.64
Group E Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	2.61

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.

(Effective Feb. 24, 1937)

Cabin Creek, W. Va.	2.37
Bradford Hollow, W. Va.	2.37
Kelly Creek, W. Va.	2.37

Canada

Ontario (Sept. 9, 1933)*	
Petrolia	$2.10
Oil Springs	2.17
Turner Valley, Alberta province (Dec. 16, 1936):†	
Clear naphtha	$2.60
Discolored naphtha, 65 gravity and higher	2.36
Discolored naphtha and crude oil, 40-40.9 gravity	1.55
Increasing 3 cents for each degree of gravity with top price for 64-64.9 gravity	2.27

These prices delivered field tankage.
*Imperial Oil, Ltd.
†Imperial Oil, Ltd., and Regal Oil & Refining Co. On crude oil alone British American Oil Co. posted above prices on December 9, 1936.

Mexico

Panuco*	$1.24

*In U. S. currency, f.o.b. ship, based on February spot market transactions.

Gibson Field

Shell Petroleum Corp. has posted a flat price of $1.24 a barrel for crude oil in the Gibson field, Terrebonne Parish, Louisiana, effective February 20, 1937. Announcement was made at the Houston, Tex., office of the company, April 24.

Texas Wildcats

(Continued from Page 113)

Runnels County

K Z Oil Co. No. 1 B. Fletcher, E. C. Good Sur. S.D.

Price & Kramer No. 1 Giesecke, Blk. 227, Hughes Sur. Drlg. 522 ft.

Stevens & Glover No. 1 Fowler, sec. 150, E.T.R.R. Sur., 2 mi. NE of Ballinger. S.D. 200 ft.

Schleicher County

J. M. Cooper No. 2 B. Page, sec. 40, Blk. L, G.H.&S.A. Sur. Drlg. 500 ft.

Tex.Tor Oil Corp. No. 1 Judkins & Spencer, C of SW¼ sec. 33, Blk. A, A.&B. Sur. Loc.

Scurry County

Bristow & Cantrell No. 1 Tomlinson, sec. 122, Blk. 97, H.&T.C. Sur. S.D. 2,651 ft.

E. L. Goos No. 1 Henderson, sec. 148, Blk. 97, H.&T.C. Sur. Drlg. 623 ft.

Terry County

Crump & Corrigan No. 1 Lewright, 660 ft. NE, sec. 1, Blk. C-37, P.S.L. Sur. Drlg. 5,035 ft.

Ward County

Magnolia Pet. Co. No. 1-55 Sealy, sec. 55, Blk. F, G.M.M.B.&A. Sur. T.D. 3,010 ft.; testing.

L. F. White et al No. 1 Rector-Monroe, E cor. sec. 3, Blk. 1, W.&N.W. Sur. T.D. 4,475 ft.; R.U.S.T.

Winkler County

Richardson No. 1-B Walton, sec. 20, Blk. 77, P.S.L. Sur. Drlg. 3,368 ft.

York & Harper et al No. 1 Gunter & Munson, sec. 7, Blk. C, G.M.M.B&A. Sur. Drlg. 4,737 ft.

Yoakum County

Bahan et al No. 1 Shook Est., sec. 420, Blk. D, John H. Gibson Sur. Drlg. 2,404 ft.

Magnolia Pet. Co. No. 1 Mrs. M. E. Taylor, sec. 201, Blk. D, John H. Gibson Sur. Elev. 3,607 ft.; top Yates 3,040 ft.; drlg. 3,473 ft.

RANGER (CENTRAL TEXAS) DISTRICT

Brown County

J. L. McMurray Hrs. No. 1 Edington, 3 mi. S Cross Cut, R. G. Milliken Sur. A-618. O.S. 1,330-33 ft.; est. 20 bbls. fishing liner.

Callahan County

Charlie Hobbs et al No. 1 Mike Hughes, 1½ mi. SE Admiral. 150 ft. from E, 620 ft. from S, sec. 47, D.&D.A. Sur. Loc.

Eastland County

J. T. Anderson No. 1 Crist, 8 mi. N of Rising Star, sec. 36, Lavaca Co. Sch. Lds. Fsg. U.R. 1,560 ft.

J. A. Bearman et al No. 1 Mrs. R. L. Poe, S edge Cisco, sec. 79, H.&T.C. Sur., Blk. 4, U.R. 10-in. 1,540 ft.; fishing 1,600 ft.; rng. 8¼-in. csg. 2,045 ft.

Hoffman & Page No. 1 Dodd, 5 mi. S of Ranger, Subd. 11, William VanNorman Sur. T.D. 3,440 ft.; fsg. tools.

Jones County

Art Cox No. 1 West, 10 mi. E Noodle Creek pool, Lot 72, Godwin Subd., Dewitt Co. Sch. Lds. Cellar.

Crude Prices by Gravities

	Oklahoma-Kansas	Oklahoma-Kansas	North and Central Texas	East Central Texas (Mexia district)	North Louisiana-Arkansas	Gray County, Texas	Hutchinson-Carson counties, Texas	Rodessa, Louisiana-Texas and Panola County, Texas	Conroe, Tomball, Raccoon Bend, Satsuma, Texas	Gulf Coast	Gulf Coast	West Texas except Pecos County, Lea County, N. Mex.	Mirando district, Texas	Marion County, Texas	Government Wells, Texas	Anahuac, Texas	White Castle, Louisiana	Iowa, Louisiana	Cayuga, Texas
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Bel. 18	....	....	....	....	....	....	....	....	....	$.90	....	....	....	....	....	....	....	....	....
18-18.9	....	....	....	....	....	....	....	....	....	.92	....	....	....	....	....	....	....	....	....
19-19.9	....	....	....	....	....	....	....	....	....	.94	....	....	....	....	....	$.92	$.94	$.84	....
20-20.9	....	....	....	....	....	....	....	....	....	.96	$.95	....	$.90	....	$.90	.94	.96	.86	....
21-21.9	....	....	....	....	....	....	....	....	....	.98	.98	....	.93	....	.93	.96	.98	.88	....
22-22.9	....	....	....	....	....	....	....	....	....	1.01	1.01	....	.96	....	.96	.98	1.01	.91	....
23-23.9	....	....	....	....	....	....	....	....	....	1.04	1.04	....	.99	....	.99	1.00	1.04	.94	....
24-24.9	....	....	....	....	....	....	....	....	....	1.07	1.07	....	1.02	....	1.02	1.02	1.07	.97	....
Bel. 25	....	$.98	....	....	$.90	....	....	$.93	....	....	....	....	....	$.90	....	....	....	....	$.88
25-25.9	....	1.00	....	....	.92	....	....	.95	....	1.10	1.10	$.78	1.05	.92	....	1.04	1.10	.99	.90
26-26.9	....	1.02	....	....	.94	....	....	.97	....	1.13	1.13	.80	1.08	.94	....	1.06	1.13	1.03	.92
27-27.9	....	1.04	....	....	.96	....	....	.99	....	1.15	1.15	.82	1.10	.96	....	1.08	1.15	1.05	.94
28-28.9	....	1.06	....	....	.98	....	....	1.01	....	1.17	1.17	.84	1.12	.98	....	1.10	1.17	1.07	.96
Bel. 29	$1.06	....	$.96	$1.03	....	....	....	....	1.20	....	....	....	....	....	....	....	....	....	....
29-29.9	1.08	1.08	.98	1.05	1.00	....	....	1.03	1.22	1.19	1.19	.86	1.14	1.00	....	1.12	1.19	1.09	.98
30-30.9	1.10	1.10	1.00	1.07	1.02	....	....	1.05	1.24	1.21	1.21	.88	1.16	1.02	....	1.14	1.21	1.11	1.00
31-31.9	1.12	1.12	1.02	1.09	1.04	....	....	1.07	1.26	1.23	1.23	.90	1.18	1.04	....	1.16	1.23	1.13	1.02
32-32.9	1.14	1.14	1.04	1.11	1.06	....	....	1.09	1.28	1.25	1.25	.92	1.20	1.06	....	1.18	1.25	1.15	1.04
33-33.9	1.16	1.16	1.06	1.13	1.08	....	....	1.11	1.30	1.27	1.27	.94	1.22	1.08	....	1.20	1.27	1.17	1.06
34-34.9	1.18	1.18	1.08	1.15	1.10	....	....	1.13	1.32	1.29	1.29	.96	1.24	1.10	....	1.22	1.29	1.19	1.08
Bel. 35	....	....	....	....	....	$.96	$.91	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.20	1.20	1.10	1.17	1.12	.98	.93	1.15	1.34	....	1.31	.98	1.26	1.12	....	1.24	....	1.10	....
36-36.9	1.22	1.22	1.12	1.19	1.13	1.00	.95	1.17	1.36	....	1.33	1.00	1.28	1.14	....	1.26	....	....	....
37-37.9	1.24	1.24	1.14	1.21	1.16	1.02	.97	1.19	1.38	....	1.35	1.02	1.30	1.16	....	1.28	....	....	....
38-38.9	1.26	1.26	1.16	1.23	1.18	1.04	.99	1.21	1.40	....	1.37	1.04	1.32	1.18	....	1.30	....	....	....
39-39.9	1.28	1.28	1.18	1.25	1.20	1.06	1.01	1.23	1.42	....	1.39	1.06	1.34	1.20	....	1.32	....	....	....
40,over	1.30	1.30	1.20	1.27	1.22	1.08	1.03	1.25	1.44	....	1.41	1.08	1.36	1.22	....	1.34	....	....	....

Column 1—Companies posting are Barnsdall, Bell, Champlin, Continental, Cushing, Derby, Dickey, Eason, El Dorado, Empire, Falcon, Globe, Gulf, Johnson, Kanotex, National, Phillips, White Eagle, Stanolind, Sunray, Texas, Sun, Vickers and Wilcox.
Column 2—Anderson & Prichard, Carter, Cosco, Deep Rock, Magnolia, Mid-Continent, Pure, Rock Island, Shell, Sinclair, Skelly and Tide Water.
Column 3—All purchasers.
Column 4—Humble Oil & Refining Co. and Sinclair Crude Oil Purchasing Co.
Columns, 5, 6, 7 and 8—All purchasers.
Column 9—Humble Oil & Refining Co. and Sun Oil Co. Tide Water Oil Co.'s schedule starts at 35 degrees, $1.34 with 2-cent spread up to 40 and over at $1.44. (Raccoon Bend prices are for deep sand oil.)
Column 10—The Texas Co. (Gulf Refining Co. pays same prices up to and including 34 gravity, but continues its 2-cent spread up to 40 and over at $1.41.)
Column 11—Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Sun Oil Co.
Column 12—All purchasers.
Column 13—Humble Oil & Refining Co.
Column 14—Magnolia Petroleum Co.
Column 15—Sun Oil Co.
Column 16—Gulf Refining Co.
Columns 17 and 18—Shell Petroleum Corp.
Column 19—Tide Water Oil Co.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1937 High	1937 Low	Week ended May 1 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
114⅞	95	2,100	100	95	100	Amerada Corp.	788,675	N.P.	50cQ	1-30-37	$2.00	125½	75	80	48½
37	29⅜	21,900	32	29⅜	31	Atlantic Refining	2,664,904	$25	25cQ	3-15-37	1.25	35⅛	26⅝	28	20½
43⅜	31	13,600	37	31	33½	Barber Co.	387,149	$10	25c.	6-1-37	.50	38½	21	22½	11¾
35¼	26⅛	38,500	30	27¼	28¼	Barnsdall Oil Co.	2,131,090	$5	25cQ	5-1-37	.80	28¼	14⅛	14¾	5⅞
20⅞	12½	56,000	13⅞	12½	13¾	Columbia Gas & Elec.	11,610,036	N.P.	20c	11-16-36	.40	23⅜	14	15¾	3⅜
17⅞	15	84,100	16⅜	15	16	Consolidated Oil Corp.	13,983,287	N.P.	20cQ	5-15-37	.80	17¼	11½	12¼	6½
47⅜	40¼	22,800	45	41⅜	44½	Continental Oil of Delaware	4,682,671	$5	25cQ	3-29-37	1.50	44⅞	28⅛	35	15⅝
17⅝	12½	105,900	17	13⅝	16⅝	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	13⅞	6⅜	7	1½
35⅜	28¼	17,600	31⅞	28¼	30⅜	Mid-Continent Petroleum	1,843,872	$10	50cSA	6-15-37	1.15	30⅞	17¼	20½	9½
34	26⅞	3,500	29½	27¾	29½	Mission Corporation	1,399,345	N.P.	....	.....	.45	29⅞	16¾	17⅜	10⅜
102¾	62	8,400	99¼	89⅞	98½	National Supply of Delaware	382,591	$25	....	5-15-31	....	75½	19⅞	20⅞	9
22⅞	17⅛	60,100	21¼	19⅜	20½	Ohio Oil Co.	6,563,377	N.P.	35cSA	12-15-36	.60	18	12⅛	14¼	9¼
29¾	22¼	4,200	25¾	23	25¼	Pacific Western Oil	1,000,000	N.P.	65c	12-18-36	.65	23½	11¾	14	6¾
4½	2¾	4,700	3¼	2¾	3¼	Panhandle P. & R.	198,770	N.P.	....	.....	....	4¼	1⅜	1⅞	½
59¼	49½	37,300	56¾	53	56½	Phillips Petroleum	4,152,836	N.P.	75cQ†	6-1-37	2.50	52⅜	38⅛	40	13¾
29⅞	24¼	18,400	28⅝	26	28¼	Plymouth Oil Co.	1,050,000	$5	35cQ†	3-31-37	.90	27¾	11⅞	13	6½
24⅜	18¼	69,500	20¼	18¼	19½	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	24⅞	16	17	5⅞
54⅛	40¼	16,200	46⅜	43¼	45	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	6-15-37	1.00	44	30½	36⅞	20¾
34¾	25⅝	20,600	28¾	25⅝	28⅜	Shell Union Oil	13,070,625	N.P.	25c	12-15-36	.25	28¼	14¾	16½	5½
105⅜	102	1,700	103¼	102	102	Shell Union Oil 5½% pfd.	400,000	$100	26⅛c	12-15-36	28.87½	127½	102	111	63⅛
4½	3½	1,200	3¾	3⅝	3¾	Simms Petroleum	461,698	$10	50c liq.	1-9-37	2.25 liq.	6¾	3½	18¾	4¾
60⅝	42	6,200	60½	52½	60½	Skelly Oil	1,008,514	$15	....	12-15-30	....	47⅜	19½	20½	6½
20¼	16¼	145,400	19¾	18⅛	19⅜	Socony-Vacuum	31,151,075	$15	25cSA	3-15-37	.70	17½	12½	15¾	10⅝
50	42⅜	23,500	44¾	42⅜	44½	Standard Oil of California	13,014,754	N.P.	30cQ†	3-15-37	1.20	47⅝	35	41⅛	27¾
50	43⅛	18,000	45	43⅛	44¾	Standard Oil (Indiana)	15,215,677	$25	40cQ†	3-15-37	2.40	48½	32¾	33⅜	23
32	30¾	100	30¾	30¾	30¾	Standard Oil of Kansas	200,000	$10	$1	12-26-36	1.00	31	25	32	20
76	64	51,600	67½	64	66½	Standard Oil of New Jersey	25,856,081	$25	$1.25SA†	12-15-36	2.00	70⅜	51⅛	52⅜	35¾
77½	68	900	69	68	69	Sun Oil	1,733,013	N.P.	25cQ	6-15-37	$1 & 6% Sk.	91	70	77	60½
65⅛	50⅜	106,900	61½	57¾	61	Texas Corp.	9,340,069	$25	50cQ	4-1-37	1.50	55¼	28⅞	30¼	16½
9⅝	7¼	23,500	8⅛	7¼	8	Texas Gulf Producing Co.	888,116	N.P.	5c	12-15-36	.05	8⅞	4⅜	4⅜	2½
16⅝	12⅝	26,100	14⅝	12⅝	14⅛	Texas Pacific Coal & Oil	880,703	$10	10c	6-1-37	.25	15¼	7½	9¼	3¼
21⅝	16¾	28,200	18½	16¾	18¼	Tide Water Associated	5,642,342	N.P.	20cQ	6-1-37	.70	21¾	14¾	15⅞	7⅝
28¼	24⅛	18,900	25⅛	24⅛	25	Union Oil of California	4,666,270	$25	30cQ	5-10-37	1.00	28½	20¾	24	14¾
31½	26½	2,100	27½	26½	27	Union Tank Car Co.	1,200,000	N.P.	40cQ	3-1-37	1.20	31⅝	22⅝	26½	20⅞
6¼	4¼	7,300	5	4¼	4½	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5¼	2¾	3⅛	1

*Ex-dividend. †Includes extras.

New York Curb Exchange

1937 High	1937 Low	Week ended May 1 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
21⅜	16	2,500	19⅛	18	19⅛	Bridgeport Machine Co.	260,000	N.P.	$1	12-21-36	$1.00	21	13¼	14⅛	3¾
51½	46	350	50	48¼	48½	Buckeye Pipe Line Co.	200,000	$50	$1Q	6-15-37	3.25	50	39¾	42[illegible]	[illegible]2
2¾	1⅞	22,200	2⅜	2	2⅜	Carib Syndicate	799,020	25c	....	.....	....	4⅞	1⅞	[illegible]⅞	1⅝
123	110¼	100	121	119	119	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	3-29-37	7.00	124¾	105	157	115
5⅜	3⅜	84,300	3⅞	3⅜	3⅝	Cities Service	37,804,394	N.P.	....	6-1-32	....	7⅜	3	3¼	¾
4⅝	2	3,300	2¼	2	2¼	Cosden Oil	399,687	$1	....	.....	....	4½	1½	1½	¼
38	28½	15,000	33½	30¼	33	Creole Petroleum	6,974,356	$5	25cSA	12-15-36	.50	39	19⅞	23¾	10
18⅝	13⅞	1,900	15¼	13⅞	14¾	Darby Petroleum	351,390	$5	25cSA	1-15-37	.50	18⅛	9	8⅞	4
8¼	5¼	3,400	7⅝	7	7⅛	Derby Oil & Refining	263,162	N.P.	....	.....	....	6¾	1⅞	2	⅜
47½	37	No sales	..	..	..	Eureka Pipe Line	50,000	$50	$1Q	5-1-37	4.00	47½	38½	38	33¼
63½	52½	15,100	57	52½	56¾	Gulf Oil Corp.	9,076,202	$25	25cQ	4-1-37	1.50, 100% Stk.	59	36	74¾	50¼
87	76½	5,400	81	76½	79	Humble Oil & Refining	8,923,935	N.P.	37½cQ	4-1-37	1.50	80	57	64	44
24¼	20⅛	8,400	22⅛	20⅛	21¾	Imperial Oil of Canada	26,919,871	N.P.	62½cSA‡‡	12-1-36	1.25	24½	19¾	22½	15⅜
15	7¾	700	13	11	11½	Indiana Pipe Line	300,000	$10	30cSA	5-15-37	.80	9¾	5½	6⅛	3⅝
39½	33¾	8,300	35⅜	34¼	35	International Petroleum	14,247,088	N.P.	$1.25†‡	12-1-36	2.50	39⅝	32⅝	39¾	28
15¼	11¾	7,200	12½	11¾	12¼	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	3-15-37	.50	15⅜	9⅞	11⅜	4⅜
26¾	16⅛	7,300	23¼	21¼	22⅞	Lion Oil Refining	270,000	N.P.	25cQ	12-26-36	.75	17¾	7⅝	8⅛	3½
14¼	10⅜	9,100	11¾	10⅞	11¾	Lone Star Gas	5,382,723	N.P.	20c	4-20-37	.60	14¼	9⅞	10⅞	4½
14⅝	10½	4,800	11¼	10½	10½	Midwest Oil Co.	998,444	$10	50c	6-15-37	....	..	..	..	..
7⅞	6	3,400	6½	6⅛	6¼	Mountain Producers	1,682,182	$10	30cSA	12-21-36	.60	8⅜	5	5¾	4⅛
19½	15⅝	3,700	16⅜	15⅞	16	National Fuel Gas	3,810,183	N.P.	25cQ	1-15-37	1.00	23	17⅜	20	11⅜
11⅞	10	800	11	10¼	11	National Transit	509,000	$12.50	35cSA	12-15-36	.75	15¾	9¼	10⅝	6¾
6⅛	4¾	No sales	..	..	..	New Bradford Oil	1,445,202	$5	15cSA	4-15-37	.10	4⅝	2⅞	3¼	2
5	2⅝	3,500	3⅛	2⅝	2⅞	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	.01	6⅝	1⅝	2½	1
5⅜	4½	No sales	..	..	..	New York Transit	100,000	$5	15cSA	10-15-36	.35	6¼	4¼	4⅞	3
11½	7½	500	11½	11	11⅛	Northern Pipe Line	120,000	$10	40c	6-1-37	.40	9¾	4⅞	8	5¼
9⅝	5½	37,200	6½	5½	6¼	Pantepec Oil	1,608,700	N.P.	....	.....	....	10⅛	3¼	4⅜	1¼
13¾	6⅛	4,500	7¾	6⅛	7	Root Petroleum Co.	336,045	$1	25c	11-2-36	.50	19¼	4½	5	1½
6½	4	7,100	6	5	5⅞	Ryan Consolidated	296,931	N.P.	....	.....	....	4¾	1⅞	2½	⅝
48	42	800	43½	42⅛	42⅜	South Penn Oil	1,200,000	$25	60cQ†	3-29-37	2.60	44	32½	34½	21⅝
7¼	5	100	5⅞	5⅞	5⅞	Southern Pipe Line	100,000	$10	20cSA	3-1-37	.25	7⅞	3¼	5	3⅞
42	30	No sales	..	..	..	South West Penna. Pipe Lines	35,000	$50	50cQ	4-1-37	13.00	60	44	56	44¼
20¾	19	3,300	19⅝	19	19¼	Standard Oil of Kentucky	2,604,790	$10	25cQ	3-15-37	1.35	23⅜	17⅛	24	18
13¾	11½	300	12¾	12	12	Standard Oil of Nebraska	188,403	$25	25c	3-29-37	.25	14⅝	11	12	7¾
45	33¼	2,200	39	35½	37¾	Standard Oil of Ohio	753,740	$25	25cQ	3-15-37	2.00	40	21¾	23⅝	11½
4⅞	4	10,900	4½	4¼	4½	Sunray Oil	1,910,119	$1	5c	4-26-37	.10	5	2⅝	2⅞	⅞
7⅝	6	3,100	6⅛	5¾	5⅞	Texon Oil & Land	336,028	$2	15cQ	3-31-37	.60	9¾	5⅜	6⅞	5

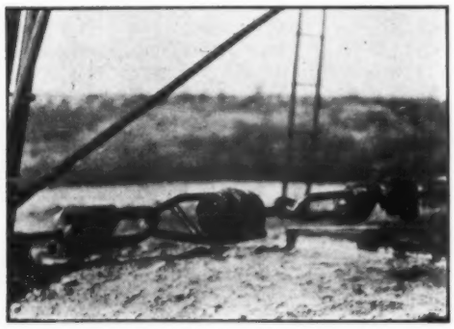
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

Jerky Motion of Pumping-Jack Reduced by Shock-Absorber

The Teco Smooth-Stroke pullrod shock-absorber is inserted in the pullrod line running from a central power to a pumping-jack to reduce the jerky



motion of pumping-jacks. It functions exactly like Teco Smooth-Stroke sucker-rod shock-absorbers in the reduction of loads and fatigue in sucker-rods. Although inserted in the rod line, Teco pullrod shock-absorbers reduce the load and fatigue in the sucker-rods of a jack well, which, of course, reduces the load and fatigue in the pullrod line.

Teco pullrod shock-absorbers may be installed in the line near the jack to make the jack operate more smoothly and to prevent transmission of vibration from the jack to the pullrods. They may also be installed near a central geared power to prevent transmission of shocks and vibrations from the line to the gears.

A single-unit pullrod shock-absorber has one rubber unit, and may be converted to a double-unit type by the addition of one rubber and a center plate. The rubbers, end plates and center plates are interchangeable with regular Teco sucker-rod shock-absorbers. This equipment is manufactured by The Engineering Co., 305 East Third Street, Tulsa, and is sold by The Lamtex Equipment Corp. of Fort Worth, Tex.

Bulletins, Booklets and Other Literature for the Trade

Brown Instrument Co., Philadelphia, Pa., has published a new catalog (No. 15-C) covering the complete line of Brown millivoltmeter pyrometers, indicating, recording and controlling. It describes the new moisture-proof rotary switch, multiple key-type switch, control relays, valve mechanisms, thermocouples and accessories.

A mailing-piece describing the construction, operation and applications of type F-124 indoor oil circuit breakers for industrial and central station use has been released by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

The Lincoln type T electrode-holder is the subject of a folder distributed by Lincoln Electric Co., Cleveland, Ohio.

J. H. Williams & Co., 75 Spring Street, New York, has published two new booklets on industrial wrenches. Booklet A-409 illustrates and describes Williams' "Supersocket" wrenches; "Superrenches"; the "Superector," a new, heavy-duty, reversible ratchet wrench; "Non-Sparking" safety wrenches; and two recently announced lines of adjustable wrenches. Booklet A-81 describes the full drop-forged carbon-steel wrench line of 50 patterns and more than 1,000 sizes.

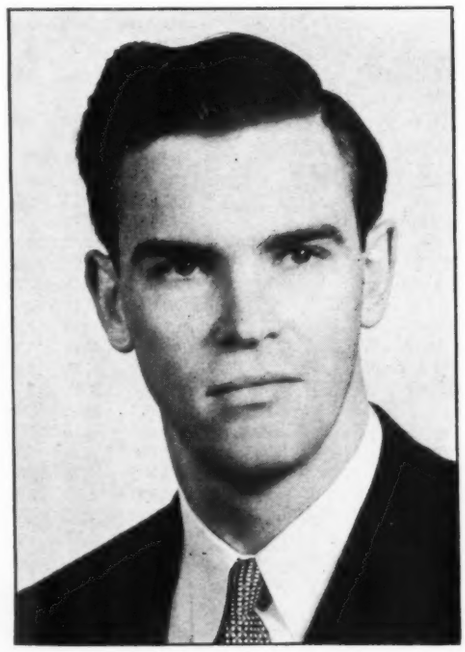
Strip-chart recording instruments for alternating and direct current, which have undergone major improvements, are discussed in a 32-page booklet obtainable from General Electric Co., Schenectady, N. Y.

A folder describing and illustrating style 65 Dresser compression fittings and the advantages of these new pipe joints may be obtained from S. R. Dresser Manufacturing Co., Bradford, Pa., or its distributors.

"Stirring Examples of Four-Wheel Drive Trucks in Action" is the title of a 12-page booklet describing activities of the Halliburton Oil Well Cementing Co. of Duncan, Okla., and obtainable from Four Wheel Drive Auto Co., Clintonville, Wis. This booklet is a reprint of a paper presented by C. P. Parsons, vice president of Halliburton, before an S.A.E. meeting.

Eugene E. Jurs Is Promoted to Executive Post in Factory

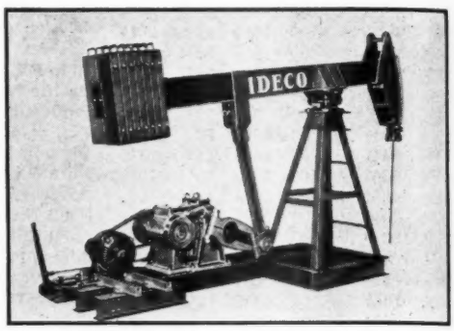
Eugene E. Jurs, who has been located in New York as assistant manager of eastern divisions for Shand & Jurs Co., has been promoted to an executive and engineering post in the company's factory in Berkeley, Calif. Mr. Jurs, a son of the organization's president, Albert E. Jurs, is making a tour of the Mid-Continent and Gulf districts, before assuming his new duties. He is accompanied on his trip by J. Z. Hertzler, Houston, Tex., southwestern division manager. For several years before going to New York, Mr. Jurs was active in development of the hydraulic valve systems, gauging equipment, conservation and vapor-recovery systems manufactured by Shand & Jurs Co.



EUGENE E. JURS

Small Geared Pumping Device Developed for Light Wells

International Derrick and Equipment Co., Columbus, Ohio, has added a small unit to its line of geared pumping machines. This new machine



has a rating of 11 horsepower at 20 S.P.M. (proposed A.P.I. nominal rating) and a peak torque rating of 54,400 inch-pounds. The gearbox is equipped with double reduction gears having an overall ratio of 31 to 1. The crankshaft is 4½ inches in diameter and is mounted in bronze bearings. The intermediate and high-speed shafts are mounted in roller bearings.

This machine is available in either single-crank or twin-crank construction. It may be furnished as a self-contained unit in which the gearbox, samson-post and prime mover are mounted on skids or mounted directly upon concrete piers. It is designed for the application of either beam counterweights or rotary counterbalance.

The center iron bearings and the upper and lower pitman-bearings are unusually heavy. The lower pitman-bearing is equipped with Timken roller bearings and is completely sealed to retain the Alemite lubrication and to exclude water and dust. The upper pitman-bearing is bronze-bushed and completely sealed. It is lubricated by means of wick oilers which deliver the lubricant to the top of the trunnion. The lubricant circulates around the journal and collects in a reservoir under the bearing.

This machine has a maximum pumping stroke of 42 inches. A mulehead assures straight-line motion at the polished rod. The mulehead is hinged which permits it to be swung upward and laid back on top of the walking-beam during servicing operations.

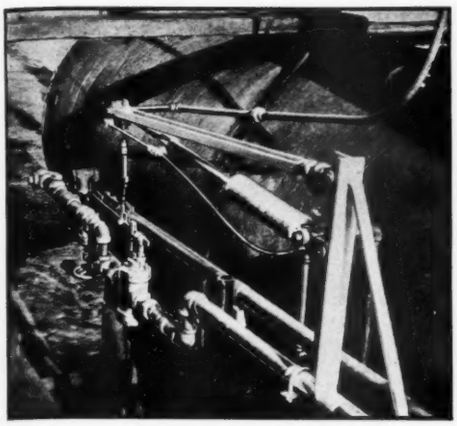
Distributor for Dresser Fittings

Arrangements have been made, according to announcement from S. R. Dresser Manufacturing Co., Bradford, Pa., for Westcott & Greis, Inc., to act as distributors for the Dresser line of style 65 pipe fittings, applicable to all types of pipe lines up to 2-inch I.D., including oil, gas, water, air, etc. Under the direction of J. H. Satterwhite, manager, Westcott & Greis will be selling agents in New Mexico, Oklahoma, Arkansas, Louisiana and southeastern Kansas. Westcott & Greis, with headquarters in Tulsa, have branches in Houston and Amarillo, Tex.

Bausch & Lomb Optical Co., Rochester, N. Y., is offering catalog D-125, covering laboratory microscopes and accessories.

Feed-Water Level Control Has New and Valuable Features

The new Campbell-Cantilever boiler feed-water level controller, announced by J. A. Campbell Co., Box 851, Long Beach, Calif., has extreme sensitivity to maintain levels within one-half inch. It is made in one size to meet all boiler needs and will operate any valve up to 12 inches. Its overall length is 48 inches and it can be operated with or without a whistle. The illustration shows the



controller mounted on a firebox boiler. A different mounting is provided for return tubular and water-tube boilers.

The controller is installed on the side of the boiler, easily accessible. The frame is set so that the water-level mark is at the same level as the desired water level in the column. When the water level drops in the gauge-glass, the water runs down an inclined tube, exposing it to the high temperature of the steam at boiler pressure. This causes rapid expansion, which is multiplied eight times by triangular construction. The end casing is moved upward, opening the valve eight times the extent of the expansion. If the water rises in the gauge, the action of the cool water rising in the tube causes contraction, which lowers the end casting and closes the valve eight times the extent of the contraction. This principle of multiplied contraction and expansion assures sensitive regulation. As an extra safety measure there can be attached either a whistle or an electric signaling device.

There are many applications for the controller other than in boiler-feed regulation. It is being successfully used for discharging condensed steam from evaporators and stabilizer reboilers. The condensate is discharged at a rate equal to that of formation, and no steam blows through.

Here and There With Men Who Manufacture Equipment

Bristol Co., Waterbury, Conn., has promoted R. G. Tower to Pacific Coast district manager with headquarters in the Rialto Building, San Francisco.

W. F. Anderson, St. Louis, Mo.; M. C. Bellamy, Seattle, Wash.; G. W. Curtis, Milwaukee, Wis.; H. V. Fleming, Birmingham, Ala.; B. E. Keifer, Cincinnati, Ohio; H. D. Robb, Pittsburgh, Pa., and B. M. Tinlin, Huntington, W. Va., have been appointed district managers in charge of steel sales for the steel and tube division of Timken Roller Bearing Co.

Jim Hoffman is a new salesman for A. Leschen & Sons Rope Co., with headquarters in Hutchinson, Kans.

Ed. W. Smith has resigned as general manager of sales of Pittsburgh Steel Co., Pittsburgh, Pa. W. G. Hume continues as manager of wire products sales and C. V. Lally as manager of seamless steel tube sales. The office of general manager of sales will remain vacant. J. K. Beeson, formerly assistant general superintendent, has been made assistant manager of sales.

Cleveland Tractor Co. has appointed Paul C. Nordloh advertising manager. Mr. Nordloh for the past three years was with Deere & Co.

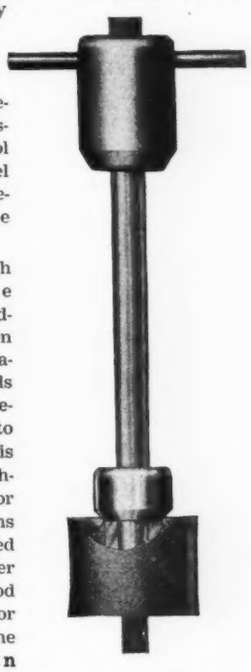
Blackhawk Porto-Power Offers Handy Workshop on Wheels

Porto-power, introduced by Blackhawk Manufacturing Co., Milwaukee, Wis., is described as a remotely controlled hydraulic ram with specially designed attachments, extensions and chains which make its power adaptable to lifting, pushing, pulling, spreading, clamping, bending or straightening operations. Mounted on a convenient wheeled stand for portability, Porto-power provides a practical and handy press offering tremendous power, ease of operation and micrometer control.

Worto-power thus is a workshop on wheels doing scores of hard jobs on cars and trucks. One unit is designed to take the place of a miscellaneous lot of equipment. The hydraulic power is developed by the Porto-pump and transferred to the small, lightweight Porto-ram through a 6-foot, flexible, high-pressure hose. The Porto-ram delivers full power in any direction. It weighs only 10 pounds and can be handled in hard-to-get-at places on motors, bodies or chassis. The operator stands 6 feet from his work, virtually eliminating likelihood of injury if something breaks or slips. Owing to flexible hose between the pump and the ram, assemblies once set for work cannot be jerked out of position because there is no direct application of outside force on the Porto-ram. Hydraulic power is supplied remotely from the Porto-pump.

Piston and Piston-Rod May Be Removed Without Damage

Oil Well Manufacturing Corp., Los Angeles, Calif., announces the Red Devil piston-knocker which is said to remove stuck tapered-type pistons quickly and easily without the damage to pistons and piston-rods caused by the old-fashioned sledge-hammer method of piston removal. The tool is made of forged steel and will last indefinitely, according to the manufacturer.

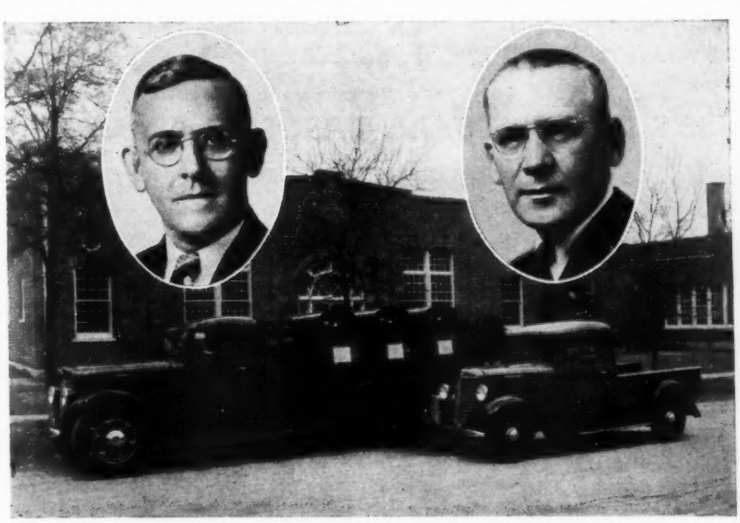


Owing to the high working pressure of slushpumps, tapered-type pistons are driven very hard upon the tapered fit of piston-rods to the extent that removal without injury to either piston or rod is almost impossible without a special tool for piston removal. Pistons and rods are removed from slushpumps either to renew the piston-rod or the piston, or for changing the size of the piston. The common practice of using a sledgehammer makes it practically impossible to remove the piston without damage.

The Red Devil piston-knocker is available in three sizes for use on 2½-, 2¼- and 2-inch diameter piston-rods.

MULLIGAN ORGANIZATION HAS UNUSUAL SERVICE UNIT

Organized primarily to provide special equipment and a trained personnel to give a complete well-casing welding service, including surface, intermediate and oil strings, Mulligan Welding Service Corp., Esperson Building, Houston, Tex., has placed a unique service unit in operation. The unit consists of a heavy-duty truck equipped with three 400-ampere electric generators and an entire acetylene welding systems. In casing welding work, two of the generators are used simultaneously, two welders working on each joint. A double-bead weld is used to connect the joints of either bell-and-spigot or plain-end casing, usually measuring about 40 feet per joint. The third generator is an emergency unit. A pick-up truck, operated by a supervising foreman, who also is an expert welder, maintains a service-of-supply for the main truck unit.

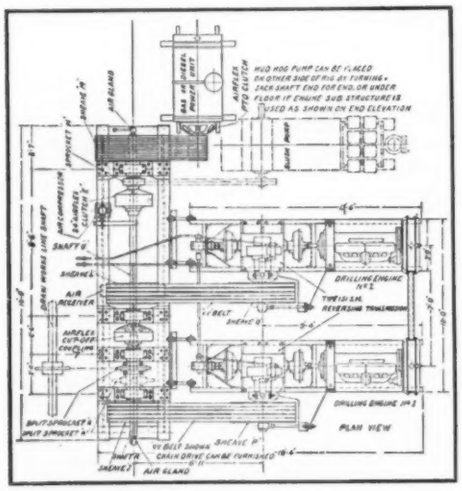


John W. Anderson, secretary-treasurer; C. A. Mulligan, president

C. A. Mulligan, president, said the company landed a 5,500-foot string of 5½-inch O.D., 16.87-pound pipe in 9 hours and 58 minutes, making 132 double-bead welds. Tank welding, principally steel storage, is included in the company's work.

Universal Selective Jackshaft for Drawworks Announced

The Universal selective jackshaft assembly announced by Young Engine Corp., Canton, Ohio, is



so constructed that power from one or more gas or diesel multiple-cylinder engines can be utilized to operate the drawworks and furnish power for one or two slushpumps. The slushpumps can be located at either side of the drilling rig by turning the jackshaft end for end. The jackshaft can be incorporated either in the drawworks assembly or mounted on a heavy welded 12-inch H-beam skid base which is then placed between the drawworks and the engine as shown in the accompanying plan. Various combinations of engine sizes can be used totaling 550 horsepower or more. Two standard or twin-motored drilling engines with reversing transmission and reduction gear can be used, the same as on cable-tool work, except that the belt pulleys would be replaced by chain sprockets and connected by chains to the driven sprockets, J and L on the jackshaft. A VV belt drive as shown may be used in place of the chain drive. The speed of the jackshaft is 385 r. p. m. at top engine speed.

The jackshaft with two engines makes a compact unit which requires 18 by 19-foot floor space. It is easily and cheaply moved and quickly reerected, as the units are self-contained. No one unit weighs over 10,000 pounds.

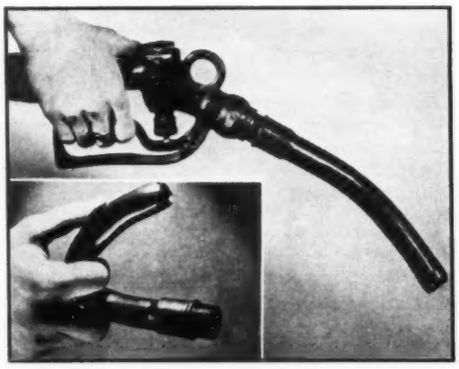
For rotating the table power from No. 1 engine is applied to the drawworks lineshaft. At the same time the other engines can drive the slushpumps at any desired speed irrespective of the speed of the No. 1 engine. The power from either one or all engines can be applied to the slushpump by engaging clutch T. For example, normally No. 1 engine will be operating the rotary table; while No. 2 engine is driving the slushpump through the friction clutch E.

The selective jackshaft consists of the shaft R supported by two Timken bearings. On this shaft are the driven sprocket or sheave, J, and the drawworks drive sprocket K. Space is provided on the shaft so that a second sprocket, K-1, may be installed.

Flex-Flo Nozzle-Tube Protects Car From Being Scratched

"Flex-Flo," the new gasoline-pump hose nozzle-tube manufactured from Thiokol, oilproof synthetic rubber, is being widely adopted by service station operators because of its flexibility. This device protects the car and aids the pump operators in tank-filling.

The most important feature for the service station operators and the customer is the silence of operation and the freedom from any possibility of scratching the fenders, trunk, or fittings on the car. The ability of this nozzle-tube to be turned in any direction with ease enables the operator to get into the new gasoline tank with the curved el-



bow and open up the meter-valve to the limit for quick tank-fills. The passageway of the smooth-bore rubber nozzle-tube eliminates the dripping and allows it to put out a steady flow. "Flex-Flo" is a product of the Gates Rubber Co.

Shovel Converted Into Dragline or Crane By Changing Boom

Northwest Engineering Co., builder of gasoline-, electric-, oil- and diesel-powered shovels, cranes and draglines, announces a new five-eighths-yard

shovel, designated the model 20. It is convertible from shovel to crane or dragline by simply changing booms.

The outstanding characteristic claimed for this unit is speed. Its design is similar to the recently announced Northwest model 25. Bases are of cast steel. Side frames are cast integral with the rotating base. Travel gears are fully enclosed and the whole crawler design is engineered and built exclusively for shovel service.

The "feather-touch" control, which assures easy operation, and the cushion clutch, which limits the hoist rope pull to a definite value, are standard equipment. Swinging clutches are of the cone type, smooth-acting, nongrabbing and cool-running. Ball or roller bearings are used on all the high-speed shafts. The power takeoff is through helical gears running in oil in an oil-tight housing.

The machine will be furnished regularly with a Wisconsin six-cylinder gasoline engine. Electric or diesel power is available. The shovel equipment will be the standard Northwest welded dipper-stick equipped with a manganese five-eighths yard dipper. A full cab is standard equipment. All operating parts above the deck are accessible within this cab.

Allen Now Division of Hannifin

Hannifin Manufacturing Co., 621 South Kolmar Avenue, Chicago, has purchased the machinery, equipment and name of John F. Allen Co., of New York, maker of air-operated riveting machines. Manufacture, sales and service of Allen riveting machines will be continued as the Allen Riveter Works, Division of Hannifin Manufacturing Co., in St. Marys, Ohio. Hannifin recently completed a new plant in St. Marys, equipped for the production of large machinery.

International Opens New Stores

International Supply Co. has opened a new office in the Bitting Building, Wichita, Kans., with R. L. Neal district manager and D. H. Collins salesman. A new store in Great Bend, Kans., is managed by R. T. Cheney, under supervision of the Wichita office. G. E. (Burt) Ponder is manager of a new store in Odessa, Tex., under the direction of W. A. Chaney, district manager in Midland, Tex.

Leeds & Northrup Co., 4934 Stenton Avenue, Philadelphia, Pa., has issued its "1937 L&N Odd Stock List," covering used electrical measuring instruments, new instruments slightly marred and new instruments of discontinued lines.

EMPIRE'S NEW NATURAL GASOLINE PLANT READY

Empire Oil & Refining Co.'s new natural gasoline plant in the Stone sector of Burrton pool, near Haven, Kans., is ready for operation following preliminary tests of the plant equipment. Daily capacity is approximately 30,000,000 feet, from which some 18,000 gallons of natural gasoline will be extracted daily. The plant is equipped with Clark horizontal compressors. The gasoline will be transported by pipe line to a loading-rack on the Arkansas Valley interurban line and from that point it will be shipped by tankcar to Empire's Ponca City, Okla., refinery.

Teague Assigned to Represent Cameron in Corpus Christi

J. M. (Red) Teague (right), photographed with Paul T. Putnam, sales department, has been appointed district representative of Cameron Iron Works, Inc., in the Corpus Christi, Tex., area. Mr. Teague's headquarters will be in Corpus Christi.

Wailes Dove-Hermiston Offers Line of Protective Coatings

Wailes Dove-Hermiston Corp., 17 Battery Place, New York, has announced a complete line of protective coatings for industry. These products are being marketed by the industrial division under the direction of Julio F. Sorzano. A complete sales promotion program has been formulated.

Items in the line are the widely known Bitumastic black solution and Bitumastic superservice black; Chromastic aluminum paint, a new product with a rust-inhibiting vehicle; Bitumastic exterior-interior paint, an all-purpose coating; Florex floor enamel; Bitugloss industrial enamel, for machinery and equipment; Thermastic high-heat aluminum; Chromastic metal primer and Bitulite mill white.

The name Bitumastic has been known for many years in connection with protection against corrosion. The history of Wailes Dove-Hermiston Corp. goes back more than 70 years to John Dove & Co. of England, noted for the manufacture of Roman cement.

Removal of Distributors Would Increase Cost of Equipment

From Bridgeport Bulletin

In the complicated business of producing oil three interests must have consideration: (1) manufacturer of exploration and production equipment; (2) the distributor of this equipment; and (3) the operator or user of the equipment. Each performs a definite service and each is entitled to a fair reward.

The user of the equipment cannot save the manufacturer's profit by making his own equipment. A manufacturer cannot economically manufacture all the equipment used in producing oil. So we find separate groups, one making pipe, another rods, another drilling muds, another machinery, and so on, each more or less specializing to increase production, lower costs and produce better products. Competition forces the savings on to the user.

But why not eliminate the middle interest—the distributor? Is he on industry's relief roll, taking from both the manufacturer and the user? Suppose the distributor were eliminated. Would this mean that the distributor's profit would be saved by either the manufacturer or the user, or divided between the two?

Elimination of the distributor would bring increased costs for the operator. For the user of oil-field equipment to obtain the same services he now receives, each manufacturer would have to set up a distributing organization, with field stores, warehouses, material yards, sales and service organizations, credit facilities, executive offices and what not. Each would necessarily pass on to the operator the full burden of the overhead, selling and distribution costs. The manufacturer's profit would be no greater—competition and greater costs would likely make it less—and the operator's costs would be enormously greater. The user would be faced with a pipe store, a mud store, a sucker-rod store, a wire store, a fittings store and dozens of others, and a flock of salesmen from each, together with the costs of maintaining all of them.

There should be no antagonism between the manufacturer, the distributor and the user, for the welfare of each is the concern of the others.

Mr. Oliver Makes Change

Thomas C. Oliver has resigned as vice president of Chemical Construction Corp., Charlotte, N. C., to devote his time to Charlotte Chemical Laboratories, Inc., and other technical projects in which he is financially interested. Mr. Oliver has opened an office in the Chemists' Club Building, 50 East Forty-first Street, New York.

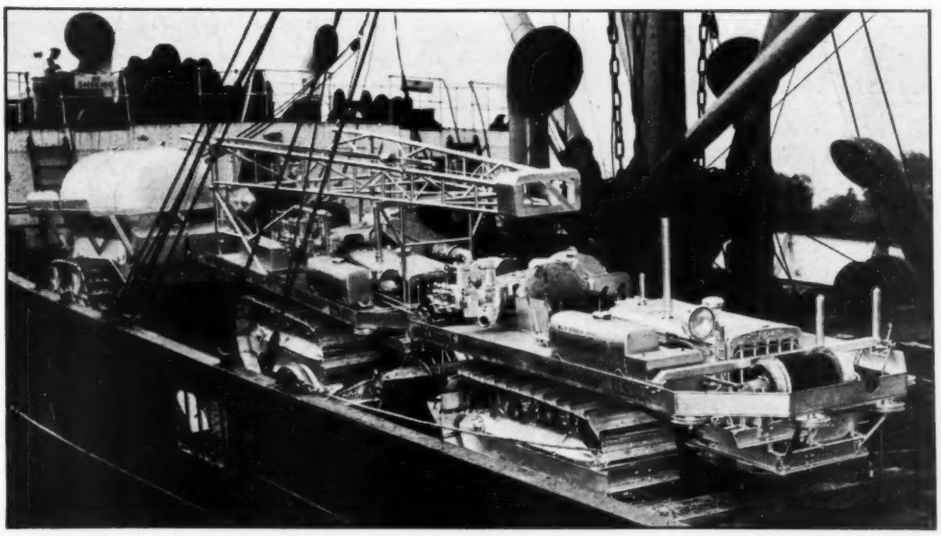
Westinghouse engine-driven welders, single operator, 200-300-400 amperes sets, are described in a publication which includes performance curves of the welder, fuel consumption curves of the engines and general descriptions of the welders and power units. Copies are available from district offices or direct from Department 5-N, Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

Power for Seismograph Drill Is Supplied by Hercules Unit

In the No. 37 seismograph drill, manufactured by Sullivan Machinery Co., the model IBX Hercules gasoline power unit is furnished as standard equipment. Through a three-speed transmission it supplies the power for the rotary drill and is carried with the pumps, drum, folding mast and other machinery on a short-wheelbase platform truck.

The mobility and compactness of the entire unit make it exceptionally useful in geophysical exploration by the seismograph method—especially in isolated areas not easily accessible by well-traveled roads. A number of the units are in use along the Gulf Coast and in some of the fields farther west. They are also in use in several foreign oil fields and in some instances have established new records for drilling speed, portability and low footage costs. Use of Hercules power in these portable drills increases the already widespread use of Hercules power in oil-field work.

DRILLING OUTFIT ON ITS WAY TO SOUTH AMERICA



This new drilling rig, water-truck and auxiliary unit are being shipped from Houston, Tex., to one of the major oil companies in Colombia, South America. The equipment, manufactured by George E. Failing Supply Co., is mounted on a Caterpillar R.D.4 diesel tractor.

Oil Man's Calendar

May

4-9—White Sulphur Springs, W. Va., Society of Automotive Engineers, summer meeting, Greenbrier Hotel.

6-7—Columbus, Ohio, American Petroleum Institute, Division of Production, Eastern district, Deshler-Wallick Hotel.

10—Kansas City, Mo., Spring meeting Natural Gas Department, American Gas Association.

19-21—Tulsa, Natural Gasoline Association of America, annual meeting, Hotel Tulsa.

20-26—Findlay, Ohio, Findlay's Golden Celebration of Oil and Gas.

23-27—Pittsburgh, Pa., National Association of Purchasing Agents (Oil Company Buyers' Group) annual convention, William Penn Hotel.

26-28—Fort Worth, Tex., National Oil Well Superintendents Association.

29—Robinson, Ill., fifth annual conference of the Illinois-Indiana Petroleum Association.

June

1-3—Colorado Springs, Colo., American Petroleum Institute, mid-year meeting, Broadmoor Hotel.

7—Kansas City, Mo., Oil Field, Gas Well-Refinery Workers of America.

10-12—Pennsylvania Grade Crude Oil Association, annual meeting, on Great Lakes S.S. "Seeandbee," sailing from Buffalo, N. Y.

11—Santa Fe, N. M., Interstate Oil Compact Commission meeting.

14-19—Paris, France, Second World Petroleum Congress, during International Exposition.

25-26—Dallas, Tex., National Oil Scouts Association, annual meeting, Baker Hotel.

June—July

28-July 2—New York, American Society for Testing Materials, fortieth annual meeting, Waldorf-Astoria Hotel, together with fourth A.S.T.M. exhibit of testing apparatus and related equipment.

September

(?)—San Francisco, Calif., North American Gasoline Tax Conference.

15-17—Atlantic City, National Petroleum Association, annual meeting, Hotel Traymore.

27—Cleveland, Ohio, American Gas Association, nineteenth annual convention.

September—October

27-Oct. 1—Rochester, National Association of Petroleum Retailers, fifth national convention.

30-Oct. 1.—Tulsa, S.A.E. Fuels and Lubricants Regional Meeting.

October

7-9—Los Angeles, Calif., S.A.E. National Aircraft Production Meeting, Ambassador Hotel.

11-15—Kansas City, Mo.—Twenty-sixth National Safety Congress and Exposition.

11-16—Houston, Tex., Oil-World Exposition.

14-16—Houston, Tex., Independent Petroleum Association of America, annual meeting.

26—New York, Oil Trades Association of New York.

28—New York, S.A.E. Annual Dinner, Commodore Hotel.

29-30—Dallas, Tex., Mid-Continent Oil and Gas Association of Texas, annual meeting.

November

9-12—Chicago, American Petroleum Institute, eighteenth annual meeting, Stevens Hotel.

December

8-10—Flint, Mich., S.A.E. National Production Meeting.

CLASSIFIED ADVERTISING

Patent Attorneys

JACK A. SCHLEY
PATENT LAWYER

Patents Obtained—infringement practice in all Courts—oil field experience. 1807-11 Tower Petroleum Bldg., Dallas. 1014 Second Nat'l. Bank Bldg., Houston. 707 Insurance Building, San Antonio. 438 Munsey Building, Washington, D. C. Address any of these offices.

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to any one, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Ranches and Farm Lands

NORTHERN NEW MEXICO RANCH FOR SALE. On highway, some timber, plenty water, fenced, ranch buildings. Total 11,300 acres, of which 250 acres under cultivation. Full mineral rights. Part of Tierra Amarilla Grant. Price $2.75 per acre. Reasonable terms. W. S. Patterson, Santa Fe, New Mexico.

1,920 acres in one tract, good ranch proposition, prospective oil value $3 per acre; 80 acres, $2 per acre; 160 acres unimproved farm land, near school, on good road $4 per acre. Luther Calahan, Idabel, Okla.

350 ACRE irrigation farm and an adjoining 3,469 acre pasture land for sale. Railroad loading shed in center of farm. County highway passes along side of farm. Location 20 miles northwest of Laredo, Texas. Write to JOHN DAVIS, Joyce, Webb County, Texas.

COLORADO CATTLE RANCH, 12,253 acres in fee, 13,000 acres can be leased from State. 2,000 acres irrigated. Water rights recently appraised by Government appraisers at $66,000.00. Cuts 1,400 tons hay, 600 acres of sugar beets, beans, etc. Railroad on property. Near Denver, on Platte river. Sacrifice at $100,000.00. Terms and some trade. JOHN R. WALKER, 1809 California St., Denver, Colorado. Main 2708. Agents protected.

Three thousand acres timber and farm lands in Ouachita, Nevada and Calhoun Counties, Arkansas, $6 to $20 acre with oil and gas rights, some near production; also leases and royalties. H. W. PHARR, 312 Rector Building, Little Rock, Arkansas.

Business Opportunities

GEOLOGIST desires connection on percentage basis plus expenses. Highest credentials. Address Box G-823, The Oil and Gas Journal, 415 Lexington Avenue, New York City.

INVESTIGATE BANKING OPPORTUNITIES, PAMPA, TEXAS. PAMPA LEGAL NEWS.

Mailing Lists

ROYALTY INVESTORS from pipe line records. Lease investors. Oil Industry Mailing List Co., 909 Tulsa Loan Building, Tulsa, Oklahoma.

ROYALTY OWNERS
Names and addresses in any State.
Royalty Lists, Box 105, Ft. Worth.

Royalties—Production

ROYALTY RECORD. Complete description of property, history of lease, plat, title record, rental record, mortgage record, expenditure record, sales record, tax record, well records and production record—all on one sheet. Printed on good ledger paper, size 11" by 8½", punched for standard ring binder. Price per 100 sheets, $5.00; leather ring binder, $4.00; imitation leather ring binder, $2.30; leather tabbed index to fit, $1.00. Order this indispensable record to-day.

THE STECK COMPANY
217 W. 9th St., Austin, Texas

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood, P. O. Box 2261, Tulsa, Oklahoma.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

Royalties—Production

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

F. A. SANSOME
Maintains a Complete Trading Organization for Brokers, Banks and Dealers
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VIRGIL O. KING, INC.
WHOLESALERS OF HIGH CLASS
PRODUCING ROYALTIES
Complete Information Upon Request.
First Natl. Bldg., Oklahoma City, Okla.

ROYALTY FOR SALE—½ of ⅛ on 240 acres, hot area near well, 460 acres, to lease surrounded by major company leases. John Z. Gill, Box 181, Clay City, Illinois.

Oil Royalties and Oil and Gas Leases
Bought and Sold
E. T. Marion
1109 Petroleum Building
Midland, Texas

Royalties—Production

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Securities and Exchange Commission. Inquiries invited.

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

PRODUCING OIL ROYALTIES
15 years of experience
L. H. WITWER
214 Kennedy Bldg., Tulsa, Okla.

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Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.55*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

S. J. JEWELL
OIL ROYALTIES
PHILTOWER,
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Producing Royalty In All Fields—Oklahoma, Kansas, Texas and New Mexico
For buyers of royalty who can purchase in larger quantities, I often have very attractive offerings.
If You Wish to Sell Royalty, Send Description and Price

ROYALTIES PURCHASING TRUST, LTD., Moorgate Hall, Moorgate London, E. C. 2., England, are buyers of producing oil royalties.

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for dealers
H. P. BOWEN
842 Kennedy Bldg., Tulsa, Okla.

For Sale—Equipment

WELDERS A.C. and D.C. electric motor and engine driven. Reconditioned. Service Co., 3732 Cedar Ave., Cleveland, Ohio.

FOR SALE: 75—10" Standard cast iron gasket type flange unions, new and reconditioned—cheap. I. T. I. O., Bartlesville, Oklahoma.

FOR SALE: 15—3' x 15' National Tank Company sand hogs—cheap. I. T. I. O., Bartlesville, Oklahoma.

FOR SALE: Several used reconditioned Hughes plunger lift units complete for use with 7" casing and 2⅜" OD or 2⅞" OD tubing. I. T. I. O., Bartlesville, Oklahoma.

FOR SALE: 25,000' of new 2⅞" OD 10 thread 5.73-lb external upset Pittsburgh seamless steel tubing reamed for Hughes plunger lift. Located at our Oklahoma City warehouse. I. T. I. O., Bartlesville, Oklahoma.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
28 West 2nd St. Cincinnati, Ohio

FOR SALE
Approximately 5,300' of 4½" drill pipe, excellent condition, 30' lengths mixed tool joints. Located at New Orleans.
MERAUX & NUNEZ, INC.
804-06 Union St. New Orleans, La.

FOR SALE: A large stock of 7" OD McEvoy hand operated blowout preventers. I. T. I. O. Company, Bartlesville, Oklahoma.

FOR SALE: Two Cameron No. 5 six stage centrifugal pumps, one with 500 h.p. GE motor, 30,000 bbl. 24 hours, with 600 h.p. GE motor, 35,000 bbl. 24 hours, synchronous motors with panel boards, good condition. MAX ZEIGLER & BROS., Muncie, Indiana.

FOR SALE—12 miles 5" Plain Ends, double randum length, Super Heated Marine Tubes for high-pressure gas line, located Buffalo, Kansas, will deliver anywhere—Priced right for quick sale—Jay Kornfeld, 415 Brown Bldg. Phones 4-2121 and 4-7056. Wichita, Kansas.

FOR SALE—Two R16 150 HP Climax drilling engines complete. General Machine & Supply Co., Wichita Falls, Texas.

FOR SALE: Two Flash Towers, 1—5 x 20' and 1—5 x 25'. Good condition, located in Okla. City. Phone 2-4066, Box 1992, Oklahoma City, Oklahoma.

FOR SALE—Four 35 HP 4 cycle Superior gas engines. General Machine & Supply Co., Wichita Falls, Texas.

POWER. 16 foot band wheel complete with engine and power house for sale eastern Kansas. E. C. PLATT, 101 W. 11th, Kansas City, Missouri.

FOR SALE: Before moving machine shop to new location, selling our entire stock used pipe, casing, valves, pipe connections, pumps, etc. Elliott Machine & Supply Co., Depew, Okla. See A. D. Elliott.

FOR SALE: 6 class C-10 Sullivan pump heads with 15' stroke used in Oklahoma City operations. I. T. I. O., Bartlesville, Oklahoma.

SEVERAL USED ROTARY RIGS
Spudders and Drilling Machines.
Several Steel Derricks & Rotary Equip.
J. S. Daniel, Beacon Bldg., Tulsa.

FOR SALE—3 Westinghouse single tandem double acting horizontal gas engines 750 HP, 150 RPM each one direct connected to 625 KW General Electric Generator; also 3 Westinghouse twin tandem double acting horizontal gas engines 600 HP, 180 RPM each one direct connected to 400 KW General Electric Generator. Engines and generators will be sold together or separately. Also 3 Ingersoll-Rand compressors, 3 Platt pumps, and other miscellaneous power house equipment including distribution board, power panels, etc. ROBERT H. REDFIELDS, Smethport, Penna.

FOR SALE—CORE DRILL. 400 ft. rods, bits, tools, etc. 28" Hydraulic. Individual motor. PONCA CITY MACHINE SHOP, Ponca City, Oklahoma.

2—200 HP Ingersoll-Rand horizontal duplex gas engine driven gas compressor units, 2 Stage Imperial Type 10 G. Also meters, pumps and sundry high and low pressure fittings, pipe and etc. at Saticoy Gasoline plant. M. J. Dwyer, 3790 S. Vermont Ave., Los Angeles, California.

Equipment Wanted

WANTED—heavy duty spudder preferably 45 H T H 49 C Star with power unit. Must be in good condition and a bargain for cash. Box 178, Oilmont, Montana.

For Sale—Equipment

Steel Storage Tanks

50—Practically new 80,000-bbl. steel roof tanks, latest type.
125—55,000-bbl. storage tanks at great saving. Prices quoted on request for tanks standing, cut down, or reerected on your grade. Have all other sizes available. All tanks strictly guaranteed.

All kinds refinery equipment, valves, fittings, machinery, pumps and pump repair parts.

Wire—Phone—Write—W. C. Berry

SONKEN-GALAMBA CORPORATION
64 North Second St. Kansas City, Kansas

For Sale—Maps

SOUTHWESTERN UNITED STATES
Includes all of following states: Texas, Louisiana, Mississippi, Arkansas, Oklahoma, Kansas, also Eastern New Mexico. Shows all oilfields by name and location. Alphabetically arranged list on margin of all discoveries these States during 1936. Lithographed. Size 3 x 4 ft. $1. Same map with pipe lines to date, white print with blue lines $7.50. Send for illustrated catalog describing 400 ownership and field maps in Texas and Louisiana.
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Our Up-to-Date Lease and Fee Ownership Maps of Counties and Combination Development Maps Save Time and Money.
WRITE FOR DESCRIPTIVE FOLDER
1937 Revised Edition Map of State of Texas, eastern N. M., parts of southern Okla., SW Ark. and La. shows Oil and Gas Fields in color, Counties and County seat and elevations, co-ordinated alphabetical index of fields and counties.
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ZINGERY OIL MAP COMPANY
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A MAP OF every county in Texas. 254 maps showing sections, blocks and surveys with binder. Special $15. Oil City Map Co., Fort Worth, Texas.

POTENTIAL PRODUCTION MAPS all West Texas and Lea County fields. Most up to date County ownership maps. Write for valuable new illustrated catalog now being printed. SOUTHWEST MAPPING CO., Ft. Worth Nat'l. Bldg., Ft. Worth, Tex.

INDIANA OIL MAPS
SOON THE HOTTEST SPOT IN U. S. Official geologist map of the largest undeveloped tract of oil land east of Miss. river. Sections numbered and shaded showing heavy and light producing territory. This is Trenton lime, shallow, heavy production territory. Maps $2.00 each while they last.
INDIANA OIL MAP CO.
807 North Ill. St., Indianapolis, Ind.

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CAPITAL SEEKERS—Put your project before 260 Key-Men. Cost trifling. Details free. Amster Leonard, Fox Theater Building, Detroit, Michigan.

CAPITAL raised for development of Oil and Mining properties. Delaware Charters. J. B. Murrow, 299 Broadway, New York.

Incorporations

CHARTERS — Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

Leases—Production

WANTED—Man to take over 12,000 acre block of leases in North Central Lonoke County, Arkansas, and drill test well. I have steel derrick and geological report. This territory is a sure shot for production. W. G. King "Trustee", Lonoke, Arkansas.

SETTLED PRODUCTION WANTED—Will pay cash for good settled production in Texas if price is right. Please give details first letter. Box H-765, The Oil and Gas Journal, Tulsa, Oklahoma.

INVESTORS in Red River County oil acreage past year. State holdings and price. Box 331, Clarksville, Texas.

I OWN 480 acres in fee next to Sisne well in Wayne County, Illinois. Will make more liberal lease than any other owner. S. M. Homan, 7205 Exchange Ave., Chicago.

Operator needing money to drill 2 wells will sell leases adjoining production in shallow wet gas field cheap. Address Box H-774, The Oil and Gas Journal, Tulsa, Okla.

WANTED financial assistance to develop several oil structures, depth 1,500 to 6,000 feet, large acreage. BROOKFIELD EXPLORATION CO., Milam Bldg., San Antonio, Texas.

OIL leases block and royalty for sale in Washita and Custer Counties, Okla. J. J. Sallaska, Washita Hotel, Cordell, Oklahoma.

OKLAHOMA UNDEVELOPED MINERALS—raw lands. $2.00 per acre. Geo. McCoy, 3623 So. Union, Tulsa, Oklahoma.

ARKANSAS
Does not have any production (proration) restrictions. The opportunity for quick "payouts" is obvious. Come here and investigate royalty and lease opportunities.
WILLIAM MONROE LAYTON
P. O. Box 411 Texarkana, Ark.

WANTED — Shallow production North and West Texas—also proven leases. Give description, potential acre yield, and cash price. "Petroleros," P. O. Box 383, Dallas, Texas.

GEOLOGISTS say Los Osos Valley Coast better than Santa Maria field. Much land leased, wells drilling—details—Owner, R. 1, Box 125, San Luis Obispo, California.

Leases—Production

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, New Mexico.

LANDS Leases, Royalties, anywhere, bought, sold. Lands, $2 acre up. Leases 25c acre, up. Advise needs. American Investment Co., Houston, Texas.

AM ready to figure with you on your bargains in Lands in fee or any type of Oil properties to buy or sell. My thirty years in this business here enables me to know values large or small. E. B. REEVES, Box 475, McLean, Gray County, Texas.

ENTERPRISING corporation owning extensive oil lands in New Mexico desires immediate development. Large drilling blocks in several locations. Attrac. deal to right party. Write Box 961, Roswell, N. M.

SOUTH ARKANSAS Leases and Royalty. Union, Ouachita and Columbia, Clark, Nevada and Hempstead counties with good titles, good play. $1 acre up. H. E. Bemis, 10 McRae Bldg., Prescott, Arkansas.

New Mexico OIL LEASES WHOLESALE
40 acres at a time.
Roy G. Barton, Clovis, New Mexico.

Refined Products

PARAFFIN WAX
Fully refined, all grades of paraffin scale. Prominent British distributor desires exclusive connection with reliable refinery for perpetual business. Reply stating melting points. Foreign & Domestic Commerce Corp., 10 East 40th St., New York, N. Y.

Situations Wanted

PETROLEUM Engineer, University graduate, twelve years' experience in land, geological and engineering departments, desires connection with a reliable company. Can furnish best of references. Addres Box H-730 The Oil and Gas Journal, Tulsa, Okla.

MECHANIC and engine setter of all types of machines. Fully experienced, best of references, sober. Address Box H-761, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED GEOLOGIST desires job as geological scout preferably South Texas. Available about July first. Address Box H-764, The Oil and Gas Journal, Tulsa, Oklahoma.

PETROLEUM ENGINEER AND GEOLOGIST: With 17 years' experience Mid-Continent, Texas and South American fields. Expert appraisal and proration experience. Last six years production superintendent Oklahoma. Desires major company connection or salary and interest with independent operator. Address Box H-765, The Oil and Gas Journal, Tulsa, Oklahoma.

THOROUGHLY experienced cracking plant, light and heavy oil operator, also, light and heavy oil treater, desires new situation. Address Box H-751, The Oil and Gas Journal, Tulsa, Oklahoma.

STILLMAN'S HELPER, 25, now in maintenance department of a Mid-Continent refinery wants work as helper on a pipe still. Graduate of I.C.S. course on petroleum refining plant, 2 years of college (mech. eng.), familiar with maintenance and flow processes of topping, Dubbs and thermal polymer units. Will go anywhere. Address Box H-771, The Oil and Gas Journal, Tulsa, Oklahoma.

GEOLOGIST desires new associates, expenses and interest proposition. Five years' exp. in Southwest Texas. Thoroughly exp. in leasing and handling blocks, Address Box H-772, The Oil and Gas Journal, Tulsa, Oklahoma.

ACCOUNTANT. Thorough knowledge oil procedure. Taxes. Experienced directing field and plant operations. Age 37 years (all in oil industry). Unencumbered. Address Box H-773, The Oil and Gas Journal, Tulsa, Oklahoma.

MECHANICAL ENGINEER experienced in plant, production and transmission equipment design and sales. Address Box H-775, The Oil and Gas Journal, Tulsa, Okla.

Help Wanted

WANTED—Refinery engineer who has had thorough experience as operating superintendent of cracking plants. Give references. Address Box H-770, The Oil and Gas Journal, Tulsa, Oklahoma.

MAN WANTED
ENGINEER experienced in absorption gasoline plant design and practice. Age about 35. For the present, residence in Denver. Address reply to PARKHILL-WADE, Inc., 973 No. Main St., Los Angeles, or 1720 California St., Denver.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Always Ready to Help You

You can acquaint thousands of oil men with your particular want or service through an advertisement in this section of The Oil and Gas Journal.

The interested readers respectfully consider the merits of every advertisement in the Classified Columns because they are always in the market for good deals.

Your lease, royalty, production, equipment or service would appeal to some of them.

Mail your advertisement now for next week's issue so that these men can make a deal with you.

The Oil and Gas Journal
CLASSIFIED DEPARTMENT

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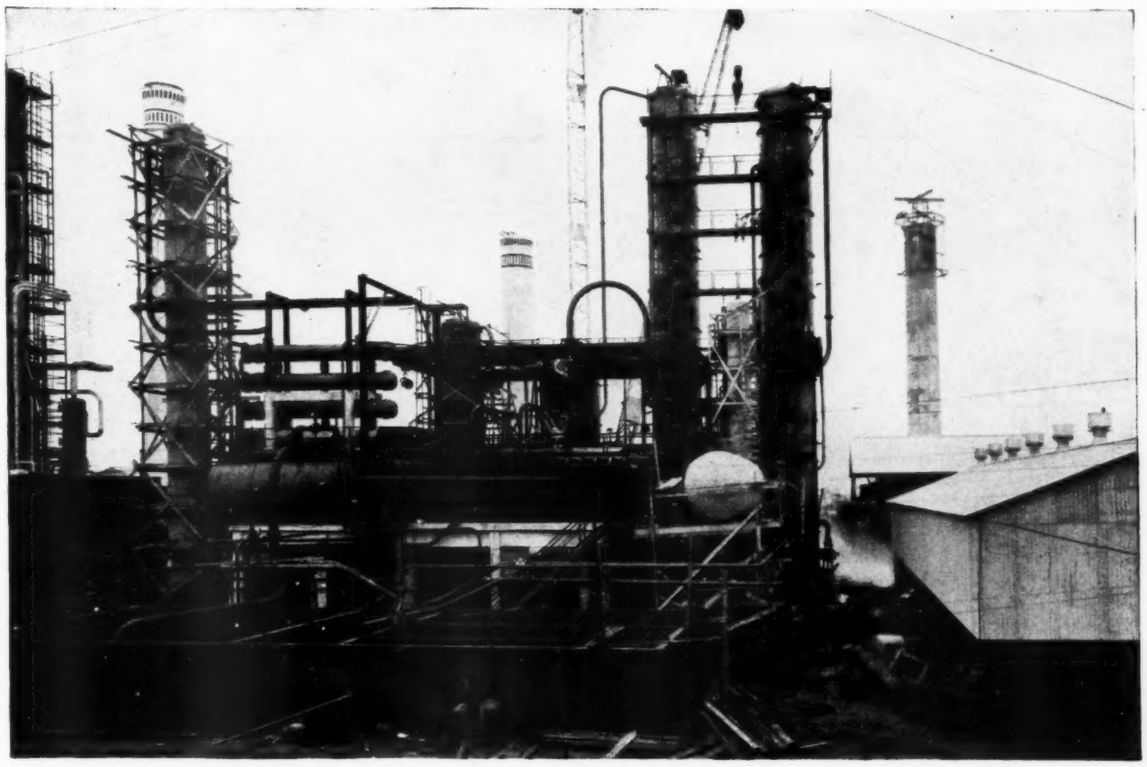
HERE IS A CRACKING UNIT

THAT WILL *Make Money* FOR THE REFINER



For a major oil company, Lummus has just completed and is now starting up a 14,000 barrel per day Lummus Combination Selective Cracking Unit operating on Van Zandt crude.

Due to its design and compactness—high octane gasoline, close-cut solvents, kerosene, furnace oil and Bunker "C" fuel oil are produced from the same unit—installation, labor and fuel costs are remarkably low. Another distinctive feature of this installation is a development of the Lummus Oil Heater to provide a controlled heating and soaking section, enabling the refiner to regulate the time and temperature effect of cracking. This, of course, assures greater flexibility in cracking, with less coke formation and longer runs.

How does your equipment check with the economy and performance of this Lummus Combination Selective Cracking Unit?

THE LUMMUS COMPANY, 420 LEXINGTON AVENUE, NEW YORK, N. Y. · BUSH HOUSE, ALDWYCH, LONDON, W. C. 2

LUMMUS

PETROLEUM REFINING PLANTS

QUALITY AND SERVICE *must* GO HAND IN HAND

30 WAREHOUSE LOCATIONS SERVING EVERY PRODUCING STATE AND FIELD IN THE COUNTRY.

Not long ago a mid-continent operator, who wasn't at all excited about the prospects for a certain well, found himself with a gusher on his hands . . . and no tanks. And as luck would have it, on the day before Thanksgiving. Late that evening the Parkersburg warehouse got his "hurry" call for tanks.

The next morning brought freezing weather and a Parkersburg tank crew that worked 24 hours without a stop to set the much needed tank battery. Coffee and sandwiches were served right on the job by the Parkersburg representative in charge of erection.

The combination of men and conveniently located stocks that makes such service possible is available to every operator. No matter where you are located you're close to a supply of Parkersburg Quality Tanks. They are available in Steel, Wrought Iron, or Wood, and each type offers exclusive features that make them the outstanding buy in their class.

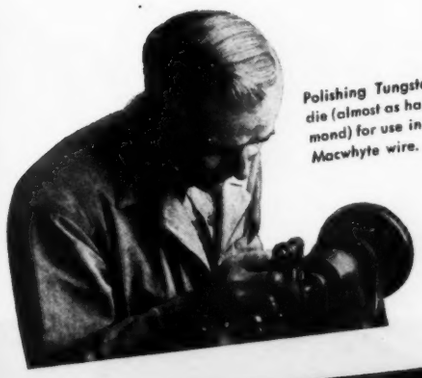
There's a representative near you who will be glad to give you full details. Call him today. Then, when you need tanks and service in a hurry, put him to work. He's on our payroll but he's *your* man in every sense of the word. Let his service prove it.

THE PARKERSBURG RIG & REEL COMPANY
Parkersburg, W. Va.
Branches In All Active Fields

PARKERSBURG
BOLTED TANKS

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription prices: Domestic, $6.00 a year; foreign, $7.00 a year. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Oklahoma, under the Act of March 3, 1879.

MACWHYTE
PREformed
WIRE LINES
INTERNALLY LUBRICATED



Polishing Tungsten-Carbide die (almost as hard as a diamond) for use in drawing of Macwhyte wire.

The cold drawing of wire increases strength and toughness of finished lines . . .

NO. 305

Monarch WHYTE STRAND PREformed Wire Lines are specially designed for jobs where lines must stand up under severe bending. Specially designed lines include rotary lines, swabbing lines, casing lines, tow lines, tubing lines, winch ropes, sucker rod lines, and fall lines. Macwhyte also makes specially designed non-preformed wire lines for the oil fields. All made in accordance with API specifications.

OIL FIELD DISTRIBUTORS:

EASTERN FIELDS
The Alma Pipe & Supply Co.
Baldwin Supply Co.
Bradford Supply Co.
Franklin Tool Company
Logan Foundry & Machine Co.
Washington Mould, Machine & Foundry Co.

CALIFORNIA OIL FIELDS
California Machinery & Supply Co.

MOUNTAIN STATES
Intermountain Belting & Packing Co.

MID-CONTINENT FIELDS
Bradford Supply Co.
Carson Machine & Supply Co.
The Drillers Supply Co.
Dunigan Tool & Supply Co.
East Texas Tool & Supply Co.
El Dorado Foundry, Machine & Supply Co.
The Federal Supply & Machine Co.
Superior Iron Works, Inc.
The Western Drilling Tool & Supply Co.
Western Supply Co.

MEXICO: General Machinery & Supply Co., S. A., Tampico

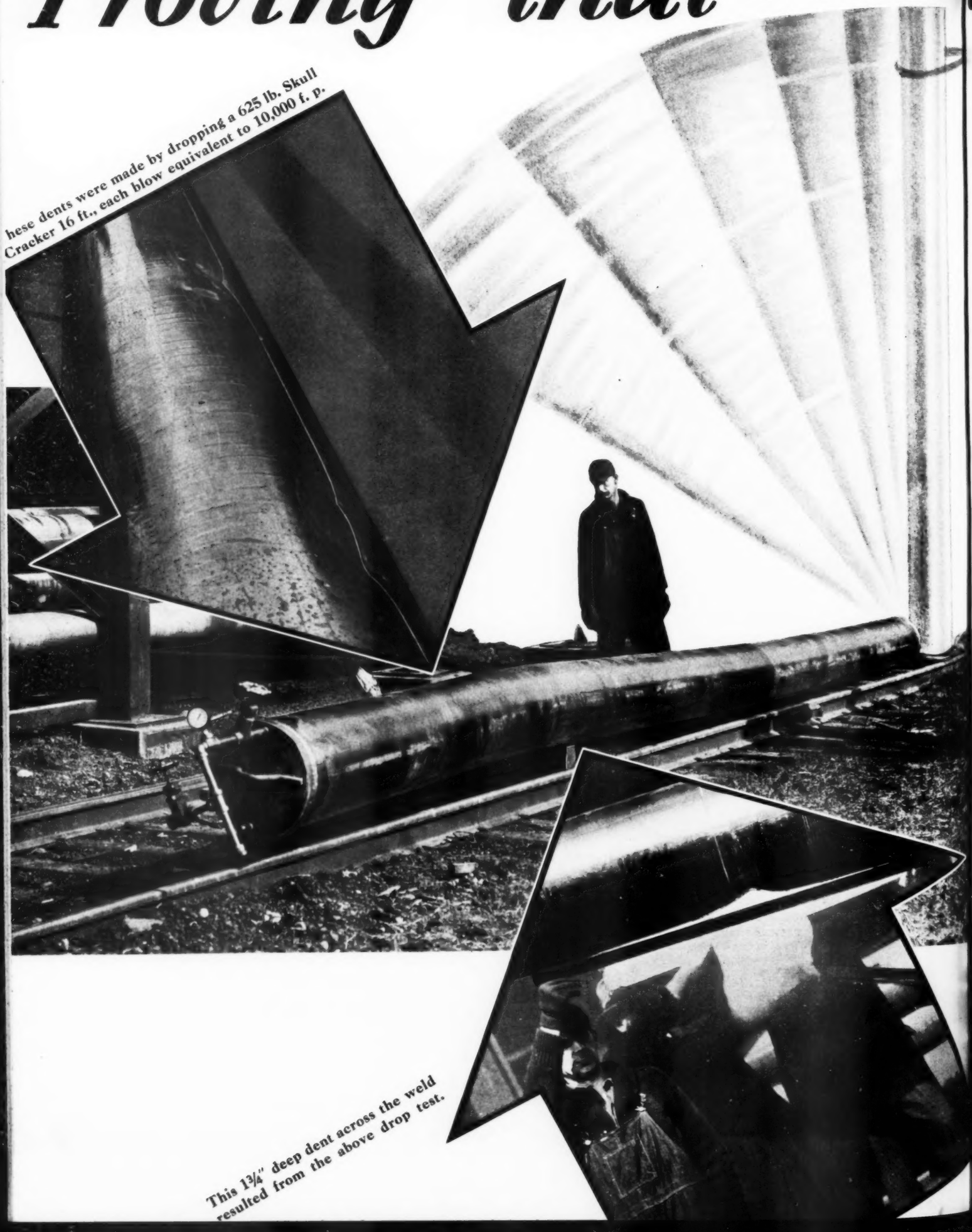
● Here you see one of the most important steps in the manufacture of the wire used in Macwhyte PREformed Wire Lines. Wires are "drawn" through from 4 to 8 dies to make them the exact diameter required.

Macwhyte wire specialists use the most up-to-date cold drawing equipment which changes the internal structure of the steel—increasing its toughness, practically doubling its strength.

Nothing but high-grade wire is made in the Macwhyte wire mill. Uniform quality rather than high tonnage is required. Specialists are in charge of each operation. The extreme care with which Macwhyte wire is cold-drawn is one of the many reasons why Macwhyte PREformed Wire Lines give such good service.

MACWHYTE COMPANY, Kenosha, Wisconsin • Manufacturers of wire lines and braided wire rope slings. Factory stocks in Fort Worth, Texas and Pittsburgh, Pennsylvania. Distributors and stocks throughout the oil fields for quick service.

Proving that . . . .



These dents were made by dropping a 625 lb. Skull Cracker 16 ft., each blow equivalent to 10,000 f. p.

This 1¾" deep dent across the weld resulted from the above drop test.

SMITH LINE PIPE

can take it!

WHANG! Down came the 16" x 1/4" x 38' length of Smith Pipe—loaded to 85% of its volume with water and under 600 lb. internal air pressure. It fell on the sharp corner of a block—4,500 lb. of pipe falling from a vertical position. No damage other than the dent shown! Then a 625 lb. Skull Cracker was dropped on it from a height of 16 feet . . . repeatedly. Reckless! Perhaps, but it shows how tough Smith Pipe really is.

Finally the pressure was raised in the pipe until it burst . . . at 2,225 lb./sq. in., the fracture 180° removed from the weld.

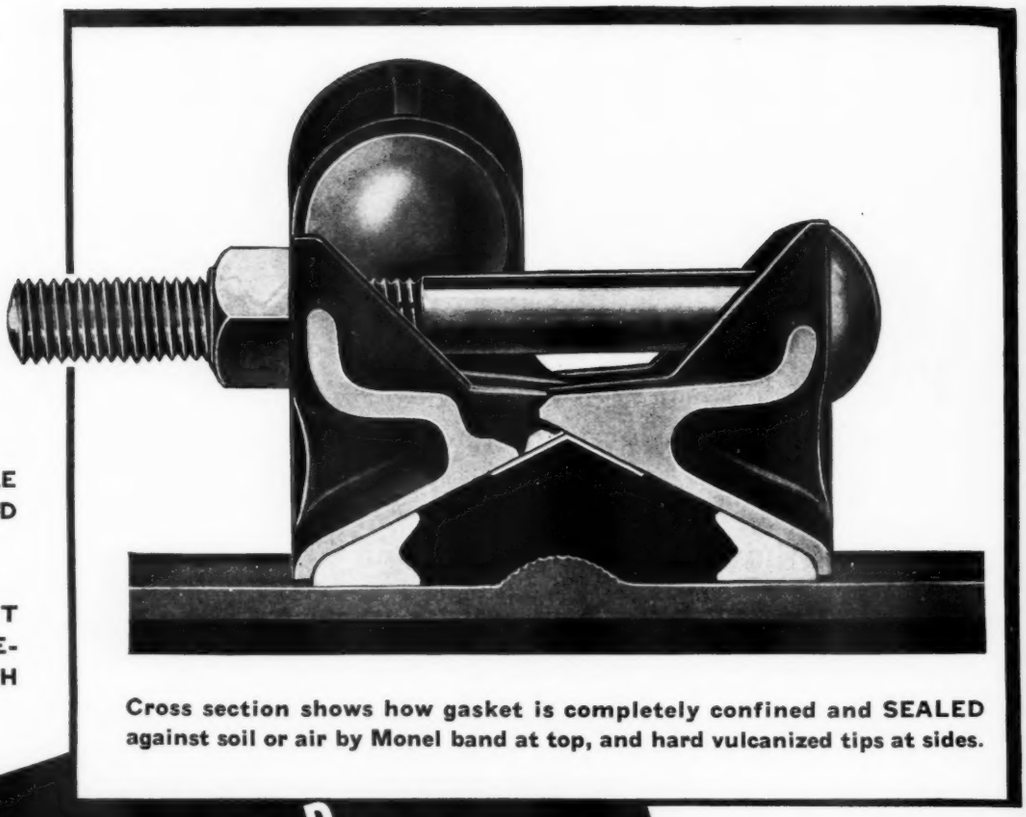
Here's reason for CONFIDENCE OF ACCEPTANCE

A. O. SMITH

MILWAUKEE, WISCONSIN • *DISTRICT OFFICES:* NEW YORK, CLEVELAND, CHICAGO, TULSA, HOUSTON, LOS ANGELES

MAKING STEEL WORK FOR YOU AS IT NEVER DID BEFORE IN

SMITH LINE PIPE—SMITH HIGH-YIELD CASING—SMITH PRESSURE VESSELS

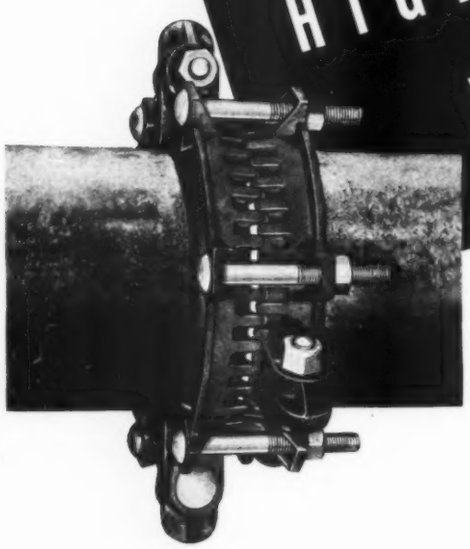


Cross section shows how gasket is completely confined and SEALED against soil or air by Monel band at top, and hard vulcanized tips at sides.

1 FOR REPAIRING PIN HOLE LEAKS OR SPLITS IN WELDED STEEL PIPE. . . .

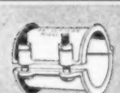
2 TO REPLACE, WITHOUT DISTURBING THE LINE, MECHANICAL COUPLINGS WHICH ARE LEAKING. . . .

SKINNER HIGH PRESSURE WELD CLAMP



★ **This effective, two-purpose Skinner clamp not only stops the leak but introduces an element of flexibility at that point which prevents future trouble. One man can apply, quickly and easily under normal operating pressure. An instant, effective, lasting repair—lighter and less expensive than a mechanical split sleeve. Tested to 800 lbs. line pressure. The two main rings of malleable iron are split for easy application. Interlocking, they confine molded gasket under tremendous pressure as bolts are tightened—stopping original leak. Pipe sizes 2″ to 24″.**

M. B. SKINNER CO. *Est. 1898* SOUTH BEND, IND.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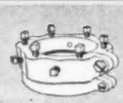
PIPE LINE CLAMP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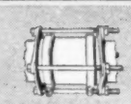
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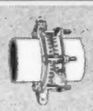
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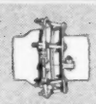

BELL JOINT CLAMP

PRESSED STEEL ECONOMY CLAMP

PICKING THE VALVES YOU NEED

NEED a brass valve, iron valve, steel valve? Have to have a gate valve, globe valve, check valve? Must you buy some fittings and need to know the exact dimensions? Have to have some data on pipe bends or pipe threads?

Turn to your Crane No. 52 or other catalogs. Pick the items you want right from their pages. Get the engineering data you need from the same authoritative sources. It's the easier way, the surer way, the swifter way to solve your piping problems and to order the piping material which you need.

Your Crane No. 52 and other catalogs contain more items, more dimensions, more illustrations, more reference tables than do any other valve and fitting books in the world. In them are the details of more than 38,000 items tested in the laboratory and proved on the job. Use them to CranEquip for satisfaction.

SEE OUR EXHIBIT AT THE AMERICAN GAS ASSOCIATION CONVENTION
KANSAS CITY, MISSOURI, MAY 10 TO 15, BOOTH NOS. 335-336-337.

CRANE

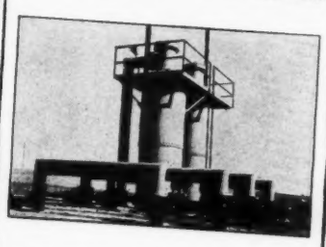
CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO, ILLINOIS

Branches and Sales Offices in One Hundred and Sixty Cities

VALVES, FITTINGS, FABRICATED PIPE, PUMPS, PLUMBING AND HEATING MATERIAL

plied in the next few days.

REDUCING SUBTRACTIVE FACTORS IN PIPE LINES



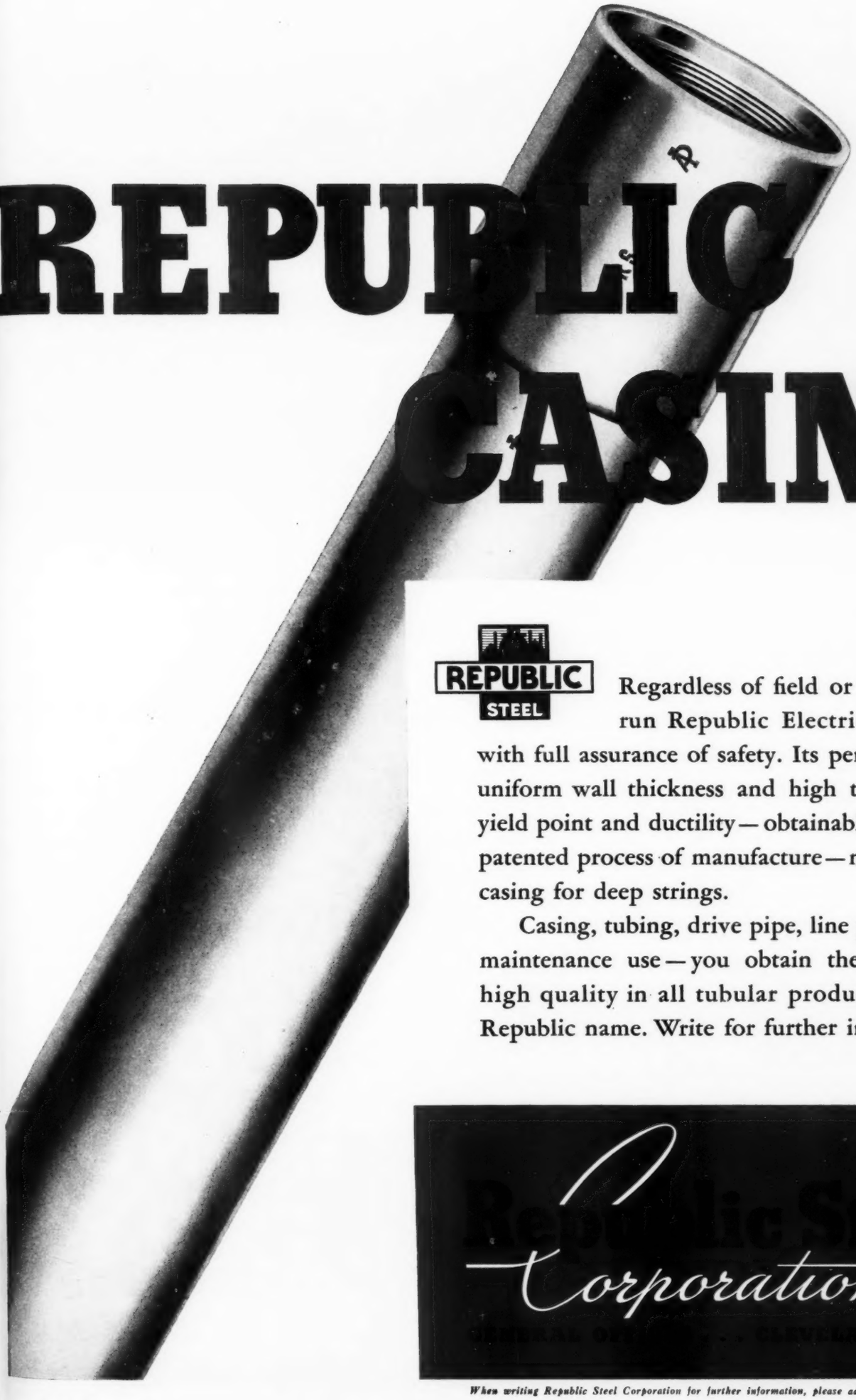
CHICAGO, ILL., April 17—Crane's experience in helping pipeline engineers reduce the factors which affect flow through pipes is available to you. This experience covers the handling of all kinds of products over all sorts of terrain and involving about every variety of corrosion known.

Often Crane finds that facts about piping which have been acquired in one field, or even in a different industry, point the way to the untying of a knotty problem somewhere else. Such a single source of experience may prove of quick benefit to you.

CranEquipment that will help you in reducing subtractive factors is available through a widespread system of branch houses and distributors. If your problem is so very unusual that regular Crane products do not meet the situation, the largest research organization and facilities in the industry are ready to help you find a solution. CranEquip your lines for satisfaction.

In any weather

REPUBLIC CASING



REPUBLIC STEEL

Regardless of field or depth, you can run Republic Electric Weld Casing with full assurance of safety. Its perfect roundness, uniform wall thickness and high tensile strength, yield point and ductility—obtainable by Republic's patented process of manufacture—make it the ideal casing for deep strings.

Casing, tubing, drive pipe, line pipe or pipe for maintenance use—you obtain the same uniform high quality in all tubular products bearing the Republic name. Write for further information.

Republic Steel Corporation

GENERAL OFFICES . . . CLEVELAND, OHIO

When writing Republic Steel Corporation for further information, please address Department OG.

You Can't Figure The Drilling Cost In Advance

But you can save a lot of that cost in advance by using a "Flex-Set" Preformed Yellow Strand Rotary Line.

Long before preforming was developed, regular Yellow Strand was well recognized as "the tops" among rotary lines. It always saved drilling costs because of its amazing toughness and long life.

Permanently preforming the wires and strands to the helical form they occupy in the finished rope further lengthens its already long life. Internal stress is greatly reduced. The rope is more flexible; easier to handle and install; remarkably resistant to drum crushing and fatigue.

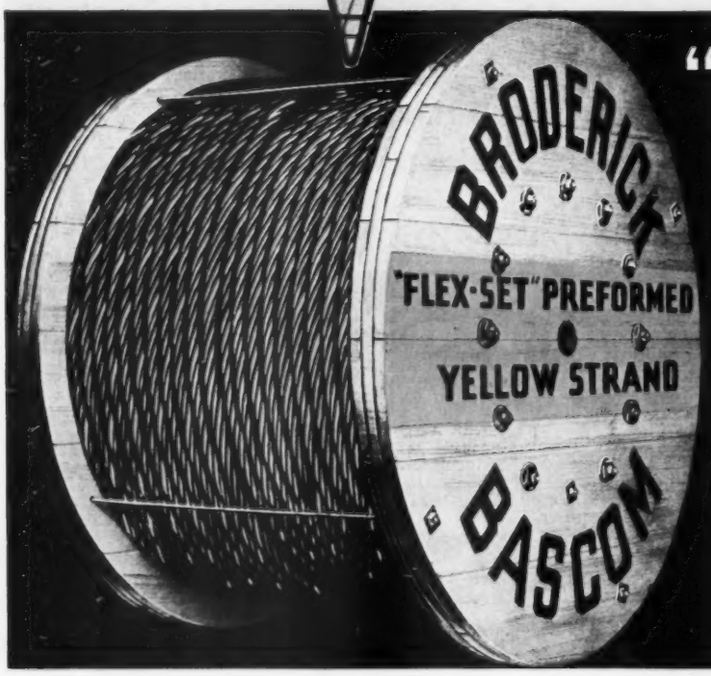
"Flex-Set" Preformed Yellow Strand is reducing drilling costs in every rotary field. Try it!

Broderick & Bascom Rope Co, St. Louis
Factories: St. Louis, Seattle, Peoria.
Houston Branch: 1311 Palmer St., Houston, Tex.

The Continental Supply Co.
Mid-Continent Distributors
Adequate Stocks in all Active Fields

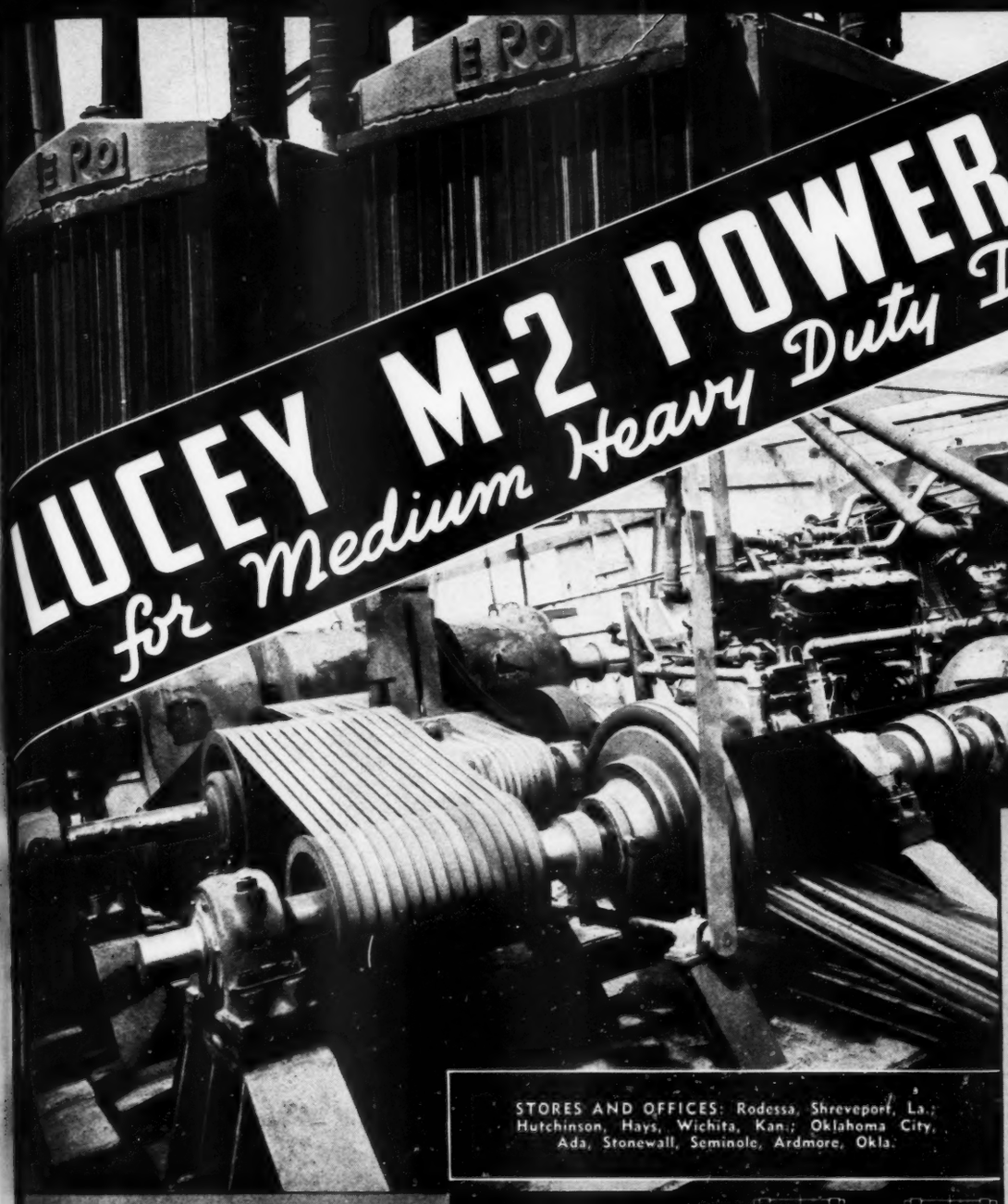
The Republic Supply Co.
of California
Oil Field Distributors for California

V-11



"Flex-Set" Preformed YELLOW STRAND ROTARY LINES

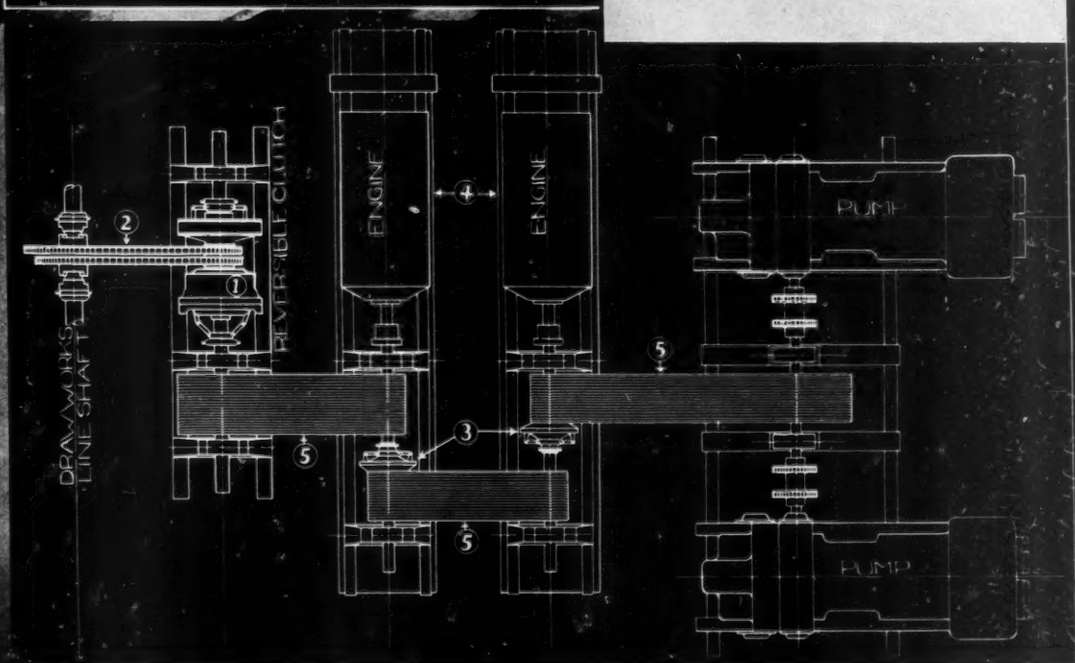
LUCEY M-2 POWER RIG
for Medium Heavy Duty Drilling



STORES AND OFFICES: Rodessa, Shreveport, La.; Hutchinson, Hays, Wichita, Kan.; Oklahoma City, Ada, Stonewall, Seminole, Ardmore, Okla.

The Lucey M-2 mechanically driven rig is powered with two Model RX1V Le Roi 7¾" x 8" V-8 cylinder engines rated at 225 HP at 900 RPM. The power take-off is arranged so that the engines may be compounded while hoisting. Normally one engine drives the rotary through the draw works, while the other engine drives the pump.

1. Model B-5083-CPS Wheland-Lucey 404 HP Reverse Clutch. 30" Twin Disc forward clutch, planetary reverse clutch. Three heavy duty roller bearings on shaft —no overhanging drives.
2. Two-speed 3⅛" pitch chain drive on cut tooth sprockets—Doubles normal speed range of conventional draw works.
3. Twin Disc Friction Clutches on power take-offs—Permits clutching and unclutching without stopping or idling engines.
4. 225 HP 8-cylinder engines. Smooth running, efficient and economical power plant with plenty of reserve power. Can be operated on gasoline, natural gas or liquid butane. Adequate repair parts carried in stock at our stores.
5. V-belt power transmission. Quiet, easily guarded, and provides a veritable cushion to absorb shock, thus protecting engines and other equipment.
6. Can be substituted for your present steam equipment, as it is designed as simply as possible for use with conventional draw works.



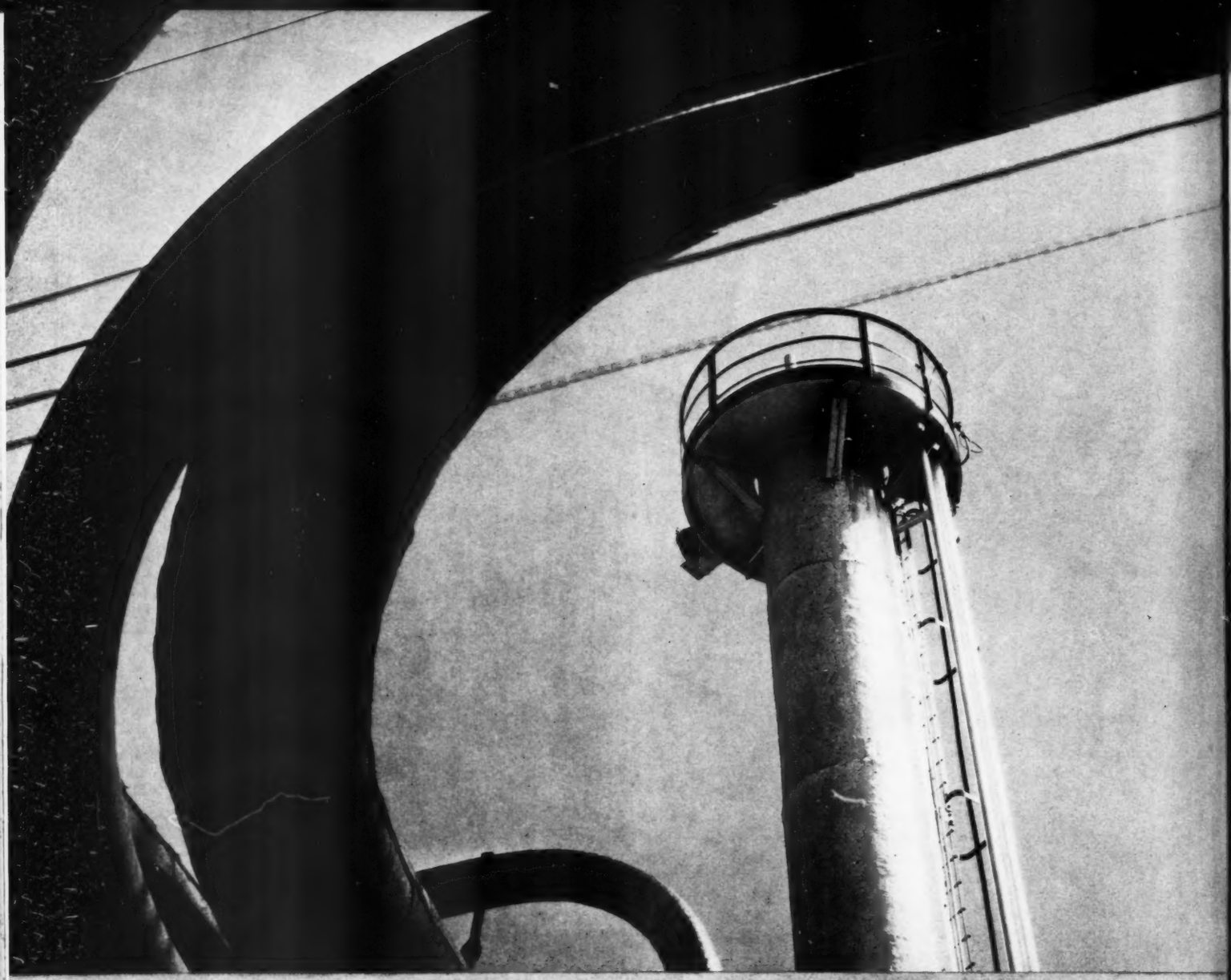
LUCEY EXPORT CORPORATION, NEW YORK AND LONDON

LUCEY PRODUCTS CORPORATION

OIL WELL SUPPLIES

TULSA OKLAHOMA

PRODUCTS LUCEY CORPORATION



Cracking Has Kept Pace With Gasoline Requirements!

In 1926 a total of 733,000 barrels of gasoline per day took care of the nation's needs.

In 1936 1,320,000 barrels per day were required to care for the nation's needs.

Combination cracking units and specialized types of cracking such as have been developed through the extensive facilities of Gasoline Products Company, Inc. were among the important factors which made it possible for refiners to provide for this increased demand upon the industry!

LICENSES *granted under United States and Foreign Patents for:* Cross, de Florez, Holmes-Manley, Tube and Tank Cracking Processes, Uni-Coil Injection Process and Combination Cracking Units. *Licensing Agents:* THE M. W. KELLOGG CO., Jersey City, New Jersey, or its *European Representative:* COMPAGNIE TECHNIQUE des PETROLES, 134 Boulevard Haussmann, Paris, France

GASOLINE PRODUCTS COMPANY

INJECTION UNI-COIL PROCESS

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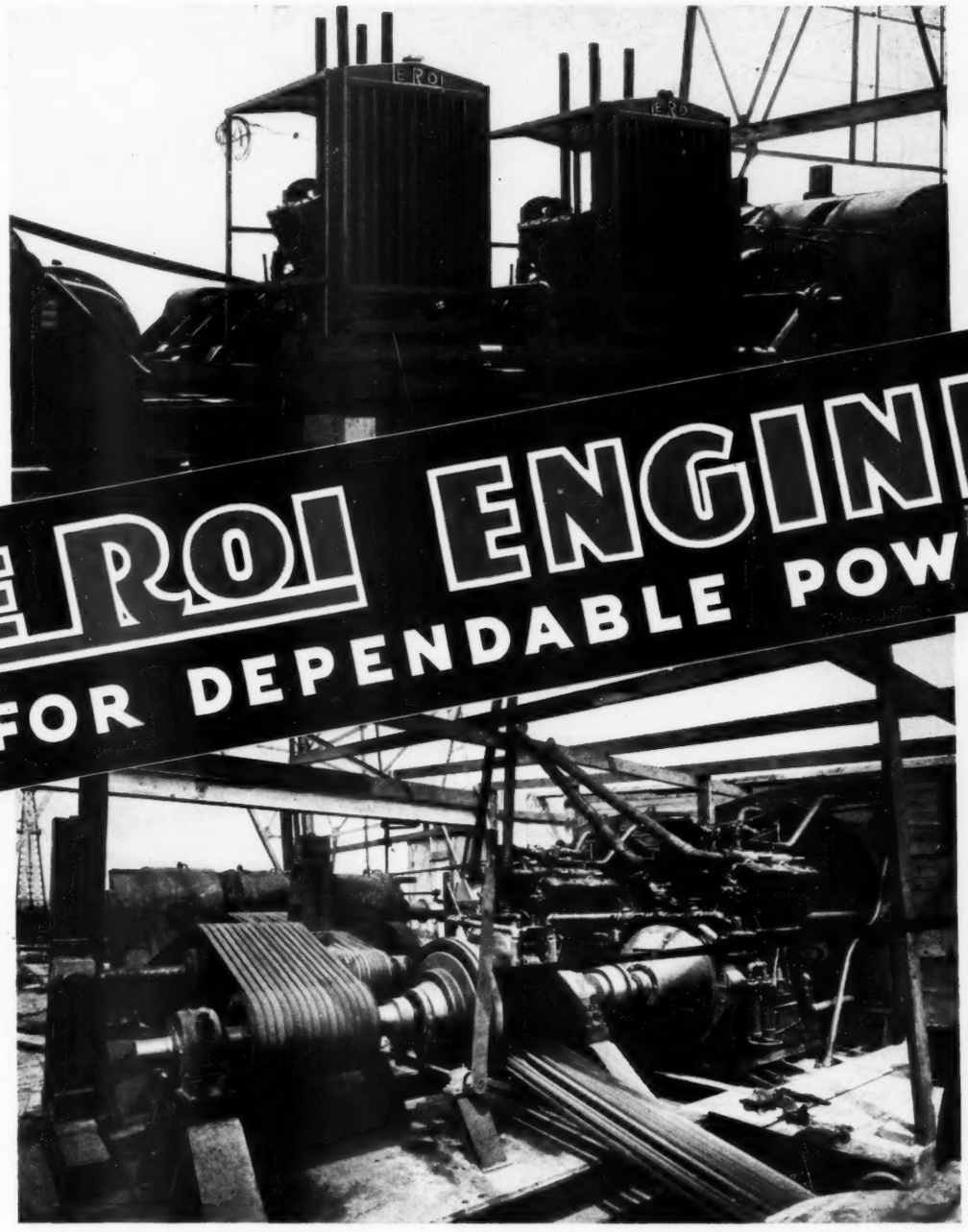

LE ROI ENGINES
. . FOR DEPENDABLE POWER

MORE than ten years of oil and gas field service have proved the dependability of Le Roi Engines for rotary drilling of the hardest kind. Because of their relatively short stroke Le Roi Engines have a flexibility and speed range not found in engines of comparable capacity. Available in a complete range of sizes, 3 H.P. to 400 H.P. for operation on natural gas, butane, or gasoline. Le Roi Company also build single and two stage air compressors, portable or stationary types, and lighting plants, 1½ K.W. to 200 K.W., A.C. or D.C. Write for complete information.

LE ROI COMPANY—MILWAUKEE, WIS.

Branch Office and Warehouse . . . . . Tulsa, Oklahoma

Shake off that JINX!

SMART selling in any line means keeping abreast of the trends. And today, in motor oils, the trend is to Emblem Pennsylvania. This is true particularly with the cream of the trade—the customers you are most anxious to cultivate. This goes whether you're a dealer operating one or more stations, or whether you're doing a jobbing business.

Month after month the demand for Emblem Oils grows stronger. The national advertising of the Association continues to point out the superior quality of Emblem Pennsylvania Oils. At the same time backing all this successful sales effort, is the protection the Association affords its members.

Don't keep on being "jinxed"! Learn more about Emblem Oils and the greater profits they are bringing dealers everywhere. See an Association field man or write headquarters for further information.

Pennsylvania Grade Crude Oil Association, Oil City, Pennsylvania

FREE! *A new book of vital importance to you. The full story of our association and our emblem. This book available to members for distribution, with member's imprint, at exceptionally low cost. Write us for particulars.*

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ADDRESS .....

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OGJ 5-13

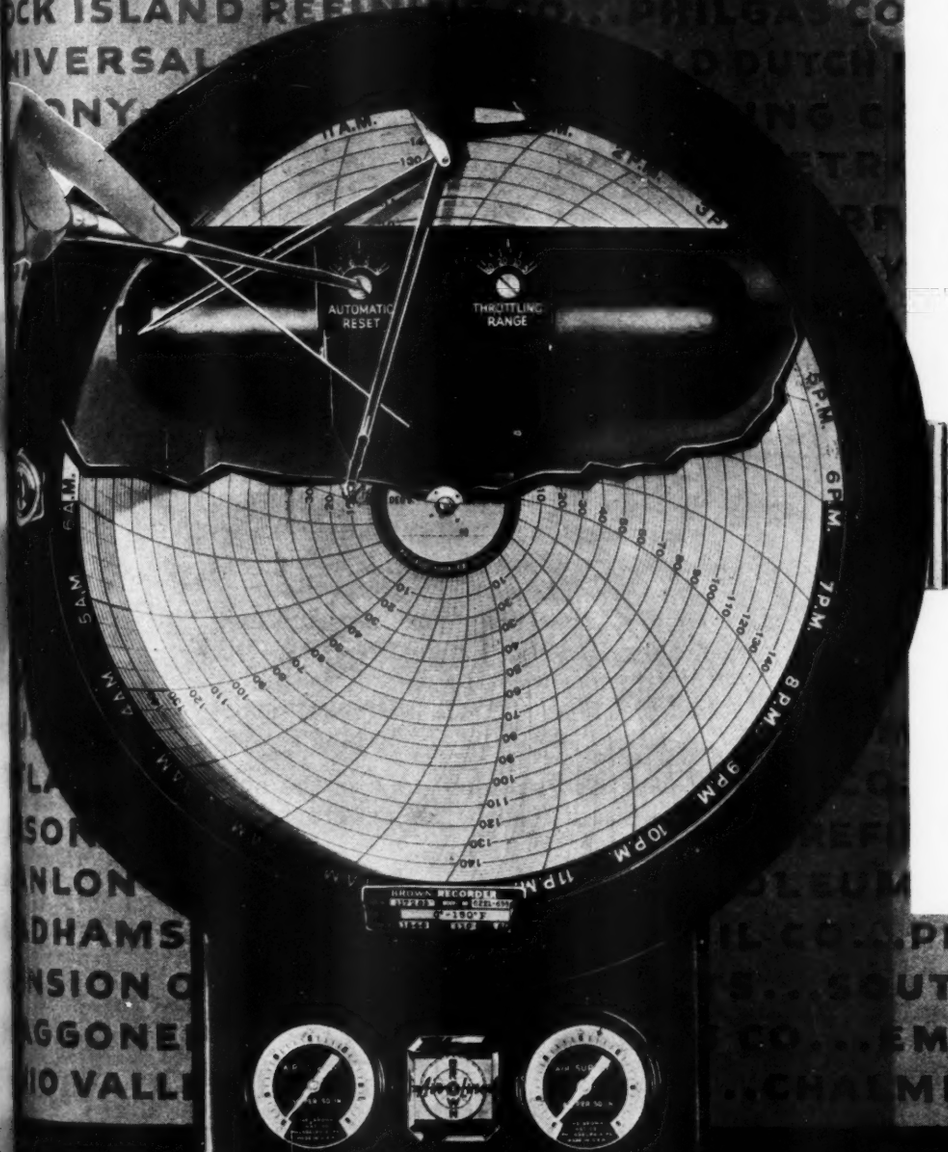
Better Oils **from the GROUND UP!**

ONTINENTAL OIL CO...SOCONY-VACUUM OIL CO...GULF OIL CORI
AGNOLIA PETROLEUM CO...STANDARD OIL CO...PURE OIL CO
N AME[illegible]AN REFINING CORP...INTERNATIONAL REFINING CO

BROWN Air-O-Line

Users Are "Saying It With Reorders"

N OIL C[illegible]...HUMBLE OIL & REFINING CO...ATLANTIC REFINING CO
EAT LAKES PIPE LINE...COASTAL REFINERIES, INC...SKELLY OIL CO
NCLAIR REFINING CO...THE TEXAS CO.
E PENNZOIL CO...THE RADO REFINING
AMROCK OIL CO...PERRY PETROLEUM
ORELINE OIL CO...CORPUS CHRISTI RE
CK ISLAND REFIN[illegible]...PHILGAS CO
IVERSAL
ONY



WHEN discriminating buyers of leading oil refineries—insist upon proof of a controller's merit—then order and reorder Brown **Air-o-Line** Controllers in constantly increasing quantities, it can only mean one thing—Brown **Air-o-Line** Controllers must fulfill every exact requirement and provide outstanding performance with simplicity.

Wherever Brown **Air-o-Line** Controllers have been installed, increased efficiency and lower costs have quickly followed. Brown **Air-o-Line** Controllers can be "tuned in" to specific process control characteristics as easily as dialing a radio. Once "tuned in," they become fully automatic. Guesswork is eliminated when Brown **Air-o-Line** Controllers are put in charge.

The use of Graduated Dials for both "Throttling Range and Automatic Reset" assures extreme accuracy and flexibility in co-ordinating and controlling process variables. Only Brown **Air-o-Line** Controllers offer you this outstanding advantage.

Other features include:

Interchangeable Control Systems . . . Direct and Reverse Controller Action . . . Sealed Control Unit . . . Stationary Nozzle Mounting . . . Positive Pen Movement . . . Balanced Pilot Valve . . . Manual Control Screw . . . Universal Mounting . . . Electric or Hand-Wound Clock.

To co-ordinate and control temperatures, pressure flows and liquid levels, consult us about your control problem, our engineers will be glad to co-operate. Write for Catalog No. 8901. THE BROWN INSTRUMENT COMPANY, *a Division of Minneapolis-Honeywell Regulator Co.*, 4488 Wayne Avenue, Philadelphia, Pa. Offices in all principal cities. Toronto, Canada: 117 Peter Street—Amsterdam-C, Holland: Wijdesteeg 4—London, England: 70 St. Thomas' St., S. E. 1.

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For Temperatures - Flows - Pressures - Liquid Levels

BROWN AIR OPERATED CONTROLLERS

OUTSTANDING PERFORMANCE WITH SIMPLICITY

That Shape Change Costs Money

Unless YOUR V-BELTS HAVE THE PATENTED **Concave SIDE**

When any V-belt bends it **changes shape.** The top, under tension, narrows. The bottom, under compression, widens. A straight-sided V-belt is thus forced into a shape that does not fit its sheave groove as shown in figure 1, below. Note the out-bulge of the **sides!**

Figure 2 shows how the precisely engineered concave side exactly corrects this shape-change. Two big savings result: (1) There is no side bulge; therefore you get uniform side-wall wear; **longer life.** (2) Full, uniform side-wall grip on the pulley carries heavier loads without slippage —saving belts and also saving power!

The Gates Vulco Rope is the only V-belt built with the patented concave side.

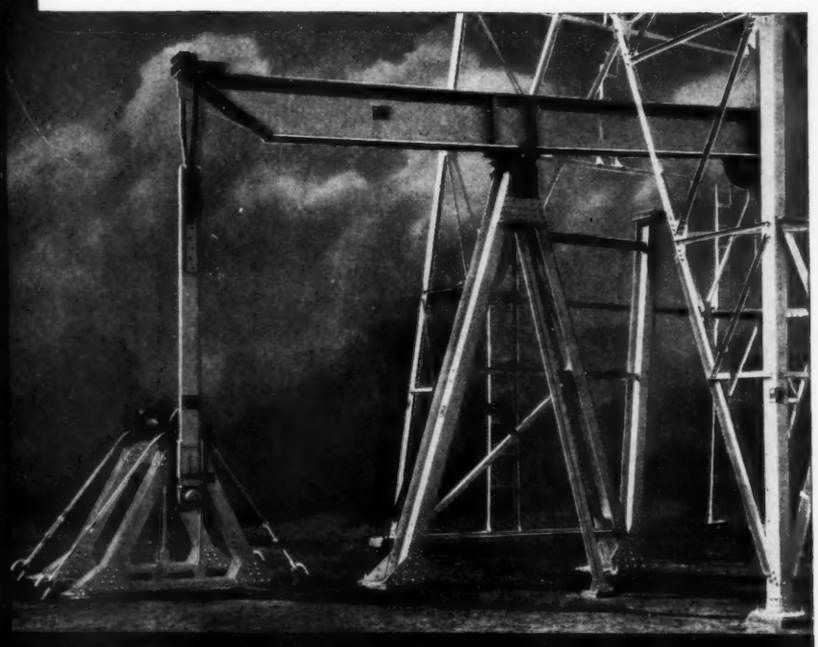
Engineering Offices and Stocks in All Large Industrial Centers

THE GATES RUBBER CO. ***Factory Branches***

Terminal Bldg., Hoboken, N. J.—1524 So. Western Ave., Chicago—741 Warehouse St., Los Angeles—2213 Griffin St., Dallas—999 South Broadway, Denver

GATES VULCO ROPE DRIVES

M. I. W. Steel Rig Fronts



Leading producers have given us many compliments on the satisfactory performance of Muskogee Iron Works Steel Fronts.

Shown above are — M. I. W. Jack Post, Pitman, Walking Beam and Sampson Post in connection with M. I. W. 94-foot Steel Derrick

M.I.W. STEEL DERRICKS AND RIG FRONTS

are shipped from stock the same day orders are received . . . . Ask for prices on Derricks, Rig Fronts and Sub-Structures of any type.

WRITE FOR NEW M.I.W. CATALOG

MUSKOGEE IRON WORKS

STEEL DERRICKS SUBSTRUCTURES ENGINE BASES FRAMING SILLS
RIG FRONTS SKID-TYPE HOISTS

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Main Office and Plant Muskogee, Oklahoma
Thompson Bldg. Tulsa, Oklahoma
Kilgore, Texas

21 Conoco Steam Cylinder Oils —for Every Type of Steam Unit

We make 21 different Conoco steam cylinder oils to match the varied operating conditions of the many kinds of steam power units. So no matter what sizes or types of engines you are using, we can supply you with oils that will help you operate at topnotch efficiency and low cost.

Conoco steam cylinder oils are made from carefully selected stocks. Each oil is scientifically blended to meet the exact lubrication needs of the engines for which it is recommended.

Among the Conoco steam cylinder oils widely used in the field are:

INCA CYLINDER OIL—A green-colored, medium-bodied oil of high quality. Recommended for engines and reciprocating pumps using superheated steam, and for bearings in rotary tables and swivels.

AZTEC VALVE OIL—A heavily compounded, quick-atomizing oil, recommended for engines and reciprocating pumps using saturated steam.

UTE VALVE OIL—A heavily compounded oil, recommended for small, high-speed engines using wet steam.

Ask the Conoco Agent nearest you for recommendations for your steam units.

CONOCO

CONOCO

Oil Field

LUBRICANTS

CONTINENTAL OIL COMPANY

CONOCO LUBRICANTS IN STOCK AT THESE POINTS:

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Denver
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KANSAS
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Hutchinson
Independence
Marion
Oxford
Russell
Wichita
Winfield

KENTUCKY
Owensboro

LOUISIANA
Lake Charles

MONTANA
Billings
Cut Bank
Great Falls
Lewistown
Shelby
Winnett

NEW MEXICO
Artesia
Farmington
Gallup
Hobbs

OKLAHOMA
Ada
Altus
Ardmore
Bartlesville
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Duncan
Edmond
Enid
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Oklahoma City
Okmulgee
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UTAH
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Glenrock
Greybull
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Lusk
Medicine Bow
Rawlins
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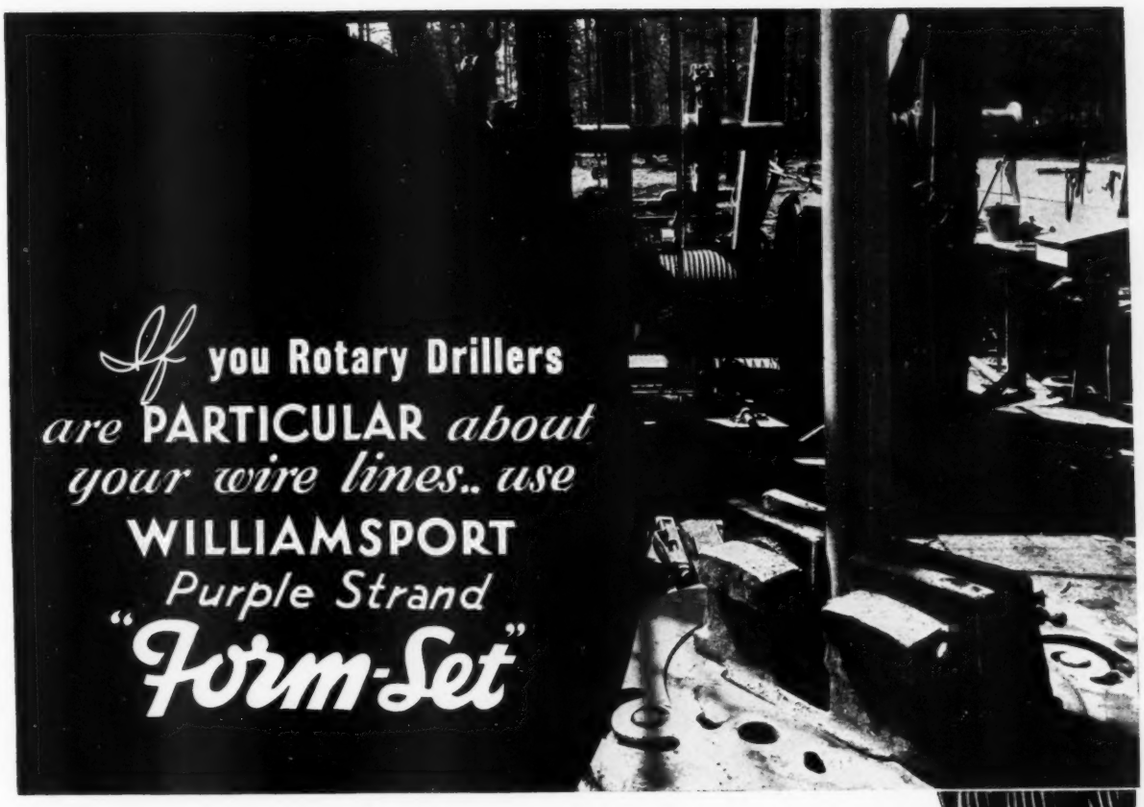
Worland



Most good drillers are particular about using Rotary Lines that give maximum service: greater operating convenience plus longer endurance. And that's why you'll find Purple Strand "Form-Set" used so extensively. For this superior line, *pre*formed the Williamsport way, has proved exceptionally efficient in Rotary Drilling.

As many drillers can tell you, this Wire Line does more work because it works longer—and charging its slight extra cost against all the extra work accomplished—you can save by using Purple Strand "Form-Set."

But see for yourself how this line serves so well; look how much tighter the wires lay together to resist friction. Note how the line hangs without twisting, instantly ready for use, and watch it perform on your operations. Make your next replacement with Williamsport.

WILLIAMSPORT WIRE ROPE CO.

WILLIAMSPORT, PA. » » » 122 S. MICHIGAN AVE., CHICAGO, ILL.

OTHER OFFICES IN ALL PRINCIPAL CITIES

Oil Country Sales Offices: Williamsport Bldg., Fourth and Midland Valley Tracks, Tulsa, Okla.; 10 North Milby Street, Houston, Texas. Mid-Continent Supply Co., Distributors in Texas, Louisiana and Arkansas. General Machine & Tool Company, Distributors in Kansas. American Pipe and Supply Company, Distributors in the Rocky Mountain Territory.

Photograph by ROBERT YARNALL RICHIE

MISSION'S RIGID SPECIFICATIONS IN THE SELECTION OF ALLOY STEELS

. . . plus . . . Mission's painstaking thoroughness in heat treating
. . . plus . . . Mission's precision manufacturing under complete inspection control at all times

MAKES ALL MISSION PRODUCTS
DEPENDABLE MONEY-SAVERS
FOR THE OIL OPERATOR

MISSION MANUFACTURING CO.

HUMBLE ROAD • • • • • • • HOUSTON, TEXAS

Mission Slips . Mission Valves . Mission Pistons . Mission Piston Rods . Mission Swabs

Sold Through Supply Stores Everywhere

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Photograph of Mission Storage Yard for raw materials. Foreground: Mission chrome nickel slip segments. Background: Mission high grade alloy steel forgings for Mission valve seats.

Both are awaiting transference to adjoining Mission machine shops, equipped with specialized high priced machines for precision manufacturing.

★

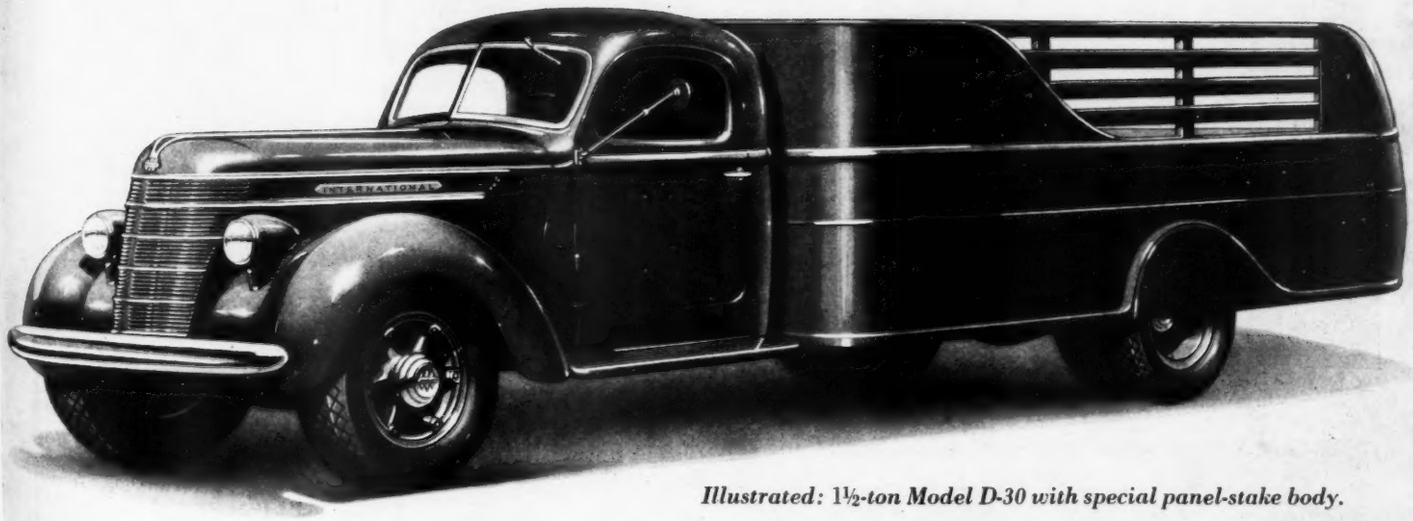
★

★

No. 9 of a Series on Mission Shop Practices

FIRST SHOWING of the New INTERNATIONALS

International Harvester presents a great new line of trucks—a major news story for the transportation world—a personal news item for every user of trucks!



Illustrated: 1½-ton Model D-30 with special panel-stake body.

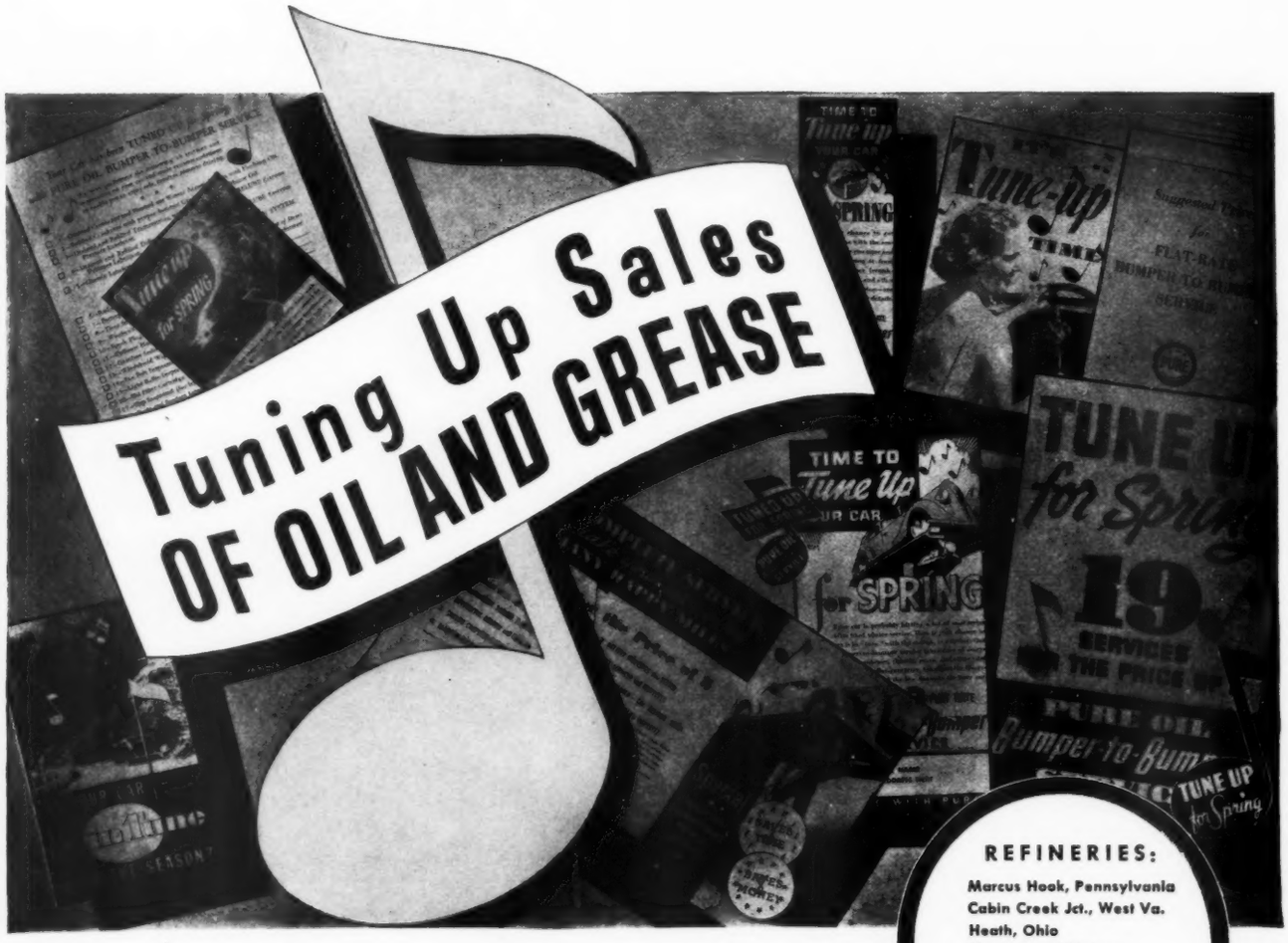
HERE is the first announcement of the new International Trucks in the gleaming metal dress of today and tomorrow. Here are *eye-values* that tell their own story, ultramodern styling to please every owner and driver, your customers and the general public. But eye-values are not the whole story; more important, in these new trucks, are *new values underneath the surface.*

Consistent International policy, adhered to through more than 30 years of ALL-TRUCK manufacture, is your guarantee that an entirely new beauty of exterior in International Trucks brings also *advanced engineering throughout the mechanical product.*

New standards of utility and performance are offered you in every model of this new line, in sizes ranging from the Half-Ton unit up to powerful Six-Wheelers. The new International Trucks are at your service, on display at International dealer and branch showrooms. Folders describing sizes and styles used in your own hauling work will be sent on request.

INTERNATIONAL HARVESTER COMPANY
606 S. Michigan Ave. (INCORPORATED) Chicago, Illinois

INTERNATIONAL TRUCKS



● A score of novel merchandising pieces on Bumper-to-Bumper Service sound the key-note for a symphony of sales by Pure Oil dealers this spring. Pure Oil's Bumper-to-Bumper sales plan enables its dealers to sell oil changes, chassis and gear lubrication at one time, one flat rate price. As a result, they sell more customers their complete needs. Pure Oil not only supplies its dealers with every type and grade of lubricant—the current campaign is just one example of how it helps dealers sell them.

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Reading, Pennsylvania
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Cincinnati, Ohio
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Norfolk, Virginia
Atlanta, Georgia
Indianapolis, Ind.
Minneapolis, Minnesota
Duluth, Minnesota
Madison, Wisconsin
Des Moines, Iowa
Tulsa, Oklahoma
Beaumont, Texas

THE PURE OIL COMPANY, U.S.A.

If your oil and grease sales are off key, 'phone, wire, or write nearest Pure Oil sales office for particulars

THE PURE OIL COMPANY, U.S.A.

PRODUCERS, REFINERS, MARKETERS OF A COMPLETE LINE OF PETROLEUM PRODUCTS

FOR QUALITY TRUCKS AT LOW COST SEE GMC

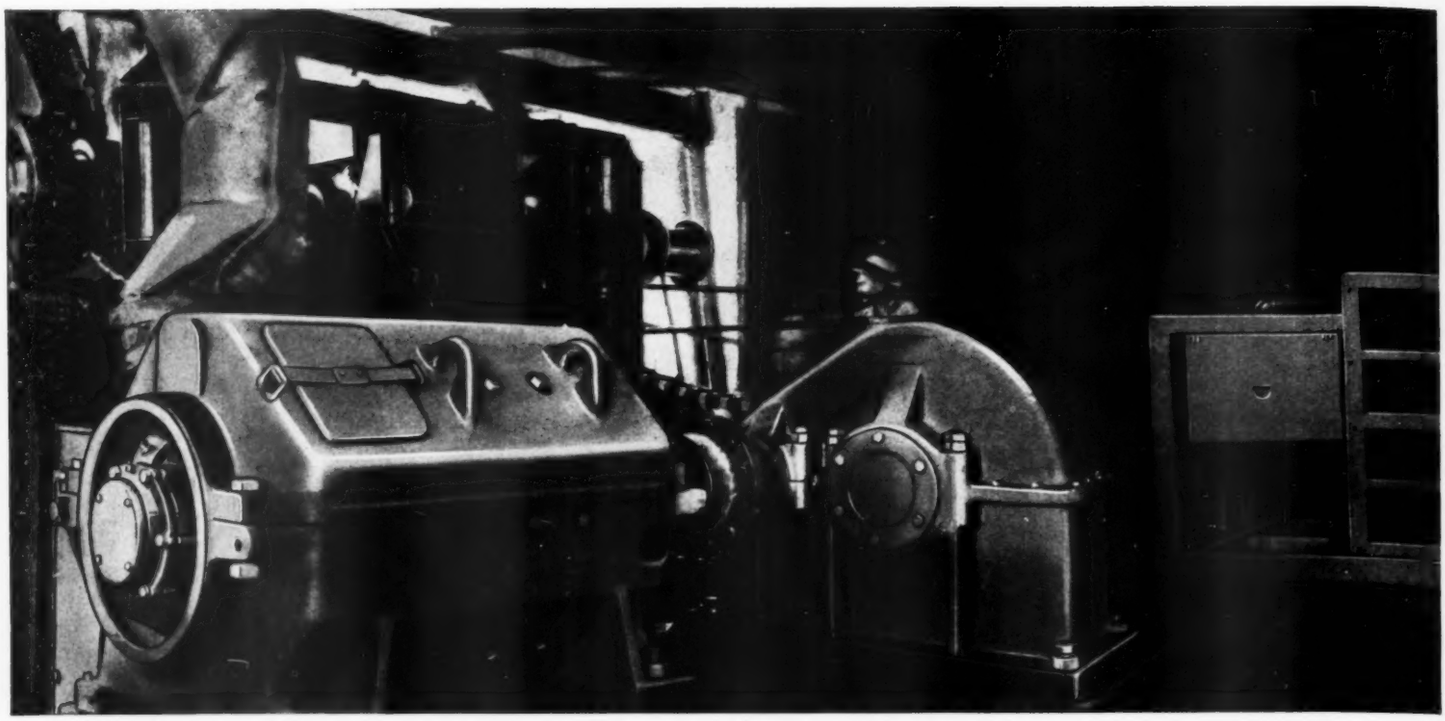
Truck buyers in the Oil Industry and in every other industry are inspecting, comparing and then selecting GMC trucks. And for very convincing reasons! Consider the extra value in the GMC 2-3 ton range, for instance. Available in either conventional or cab-over-engine types, these big, rugged GMC's have such desirable features as advanced stream-style with exclusive "dual-tone "color design, roomy, comfortable, all-steel "Helmet-Top" cabs, increased load space, safe, sure GMR hydraulic brakes of improved design, stabilized front end, protective full-pressure engine lubrication, extra rugged full-floating rear axle and dozens of other important advantages that definitely assure improved performance, greater dependability and increased economy . . . You, too, are urged to see GMC for quality at low cost—the 2-3 ton type or any other size from ½ to 12 tons that fits your needs. All are priced low on any basis of comparison. All are exceptional values.

QUALITY AT PRICES LOWER THAN AVERAGE

Time payments through our own Y. M. A. C. Plan at lowest available rates

GENERAL MOTORS TRUCKS & TRAILERS

GENERAL MOTORS TRUCK & COACH
DIVISION OF
YELLOW TRUCK & COACH MANUFACTURING COMPANY, PONTIAC, MICHIGAN



G-E Type MDP, 300-hp, d-c, enclosed, separately ventilated, drilling motor driving the draw works of a rotary-drilling rig. Variable-voltage controller at the right

To the Oil Man Who Wants Both Flexibility and Economy in Drilling Operations

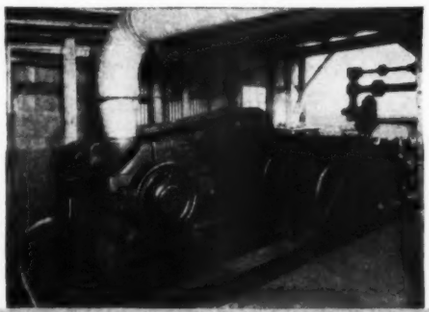
HERE is a sure way of getting both flexibility and economy in oil-well drilling:

Drive the draw works of your rotary drilling rig with a G-E Type MDP direct-current motor. Take your power from a specially designed G-E generator, and use G-E variable-voltage control to operate the motor.

This combination gives you a rotary-rig drive that is not only highly efficient but also has the flexibility and wide speed range heretofore obtainable only with steam. With it, you can get down to near-zero speeds, even to stalling, and yet maintain control and full stability. When, for example, the pipe sticks, you can take an extremely heavy pull on it, using only a small amount of power; and if you're using a diesel-generator set, you run no danger of stalling the engine.

Naturally, operations will be smooth and will result in long life and low maintenance for your equipment. Furthermore, because the G-E motor used in this application is of heavy-duty cast-steel construction and is designed especially for rotary-drilling rigs, it can be depended on for long, hard service.

This equipment can be used anywhere. Power can be taken from a transmission line or from a diesel- or gasoline-engine-driven set. For further information call the nearest G-E representative. General Electric, Schenectady, N. Y.

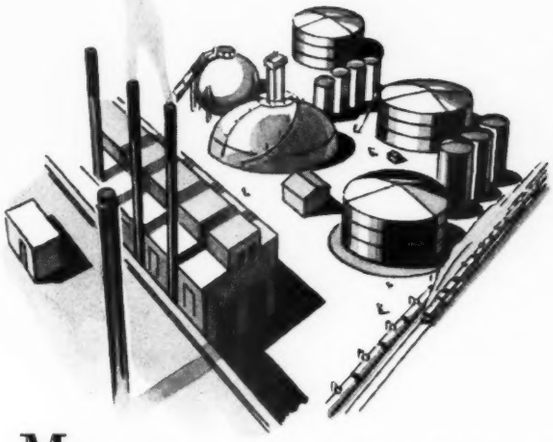


G-E Type MDP, 150-hp, d-c, enclosed, separately ventilated motor driving a mud pump. This motor is operated by the same type of control as is the draw-works drive shown above

GENERAL ELECTRIC

011-231

YOU CAN PLAN AHEAD WITH THIS FINANCING METHOD



Additional Working Capital available at low rates, through
LAWRENCE SYSTEM

MANY industries have proved the value of LAWRENCE SYSTEM in obtaining low-cost working capital. To the petroleum industry in particular, LAWRENCE SYSTEM is of special benefit.

It provides for either seasonal or continuous credit, enabling refiners, jobbers and distributors to expand buying commitments and to carry maximum reserve stocks. Further, it is a practical means of financing distribution. Stocks may be placed at the disposal of dealers without burdening their capital or credit arrangements.

The cost of LAWRENCE SYSTEM financing is exceedingly slight. Its potentialities for added profits are tremendous. For full information about this method of financing, write or wire Department L-3 of any LAWRENCE SYSTEM office. Confidential consideration will be given to any specific financing problem. No obligation is involved.

LAWRENCE SYSTEM does not entail use of finance company or other high-cost money. Among other advantages, it provides:

INCREASED CREDIT
you can exceed open credit 1 to 3 times.

LOW COST MONEY
loans made at lowest available bank rates.

FLEXIBLE OPERATION
no interruption of normal business routines.

LAWRENCE SYSTEM

CREATING COMMODITY PAPER AGAINST INVENTORY

A. T. GIBSON, *President*

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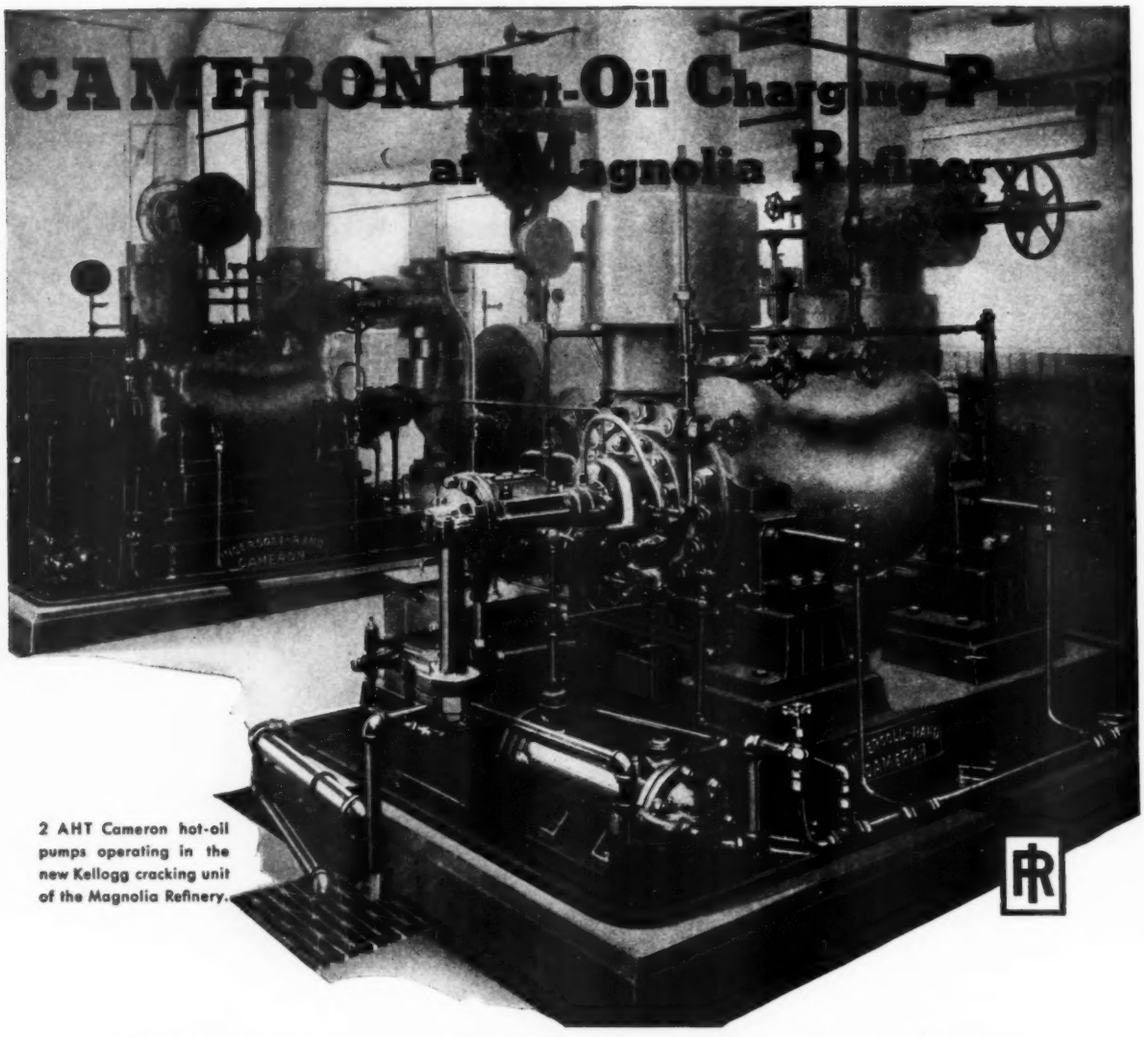
FRESNO, CALIF: 2030 Anna St. • DALLAS: Santa Fe Bldg. • HOUSTON: 601 Shell Bldg. • SPOKANE: 155 So. Stevens
SEATTLE: 1014 Fourth Ave. So. • PORTLAND, ORE: U. S. Natl. Bank Bldg. • HONOLULU: Dillingham Trans. Bldg.



2 AHT Cameron hot-oil pumps operating in the new Kellogg cracking unit of the Magnolia Refinery.

Performance Records Tell the Story

The widespread endorsement of Cameron Hot-Oil cracking-coil charging pumps has been the result of their exceptional performance records.

In a large number of refineries the AHT has proved its dependability by many thousands of hours of operation without the usual long delays and high costs needed for repairs and dismantling. AHT Pumps can always be relied upon to maintain high efficiency and full capacity.

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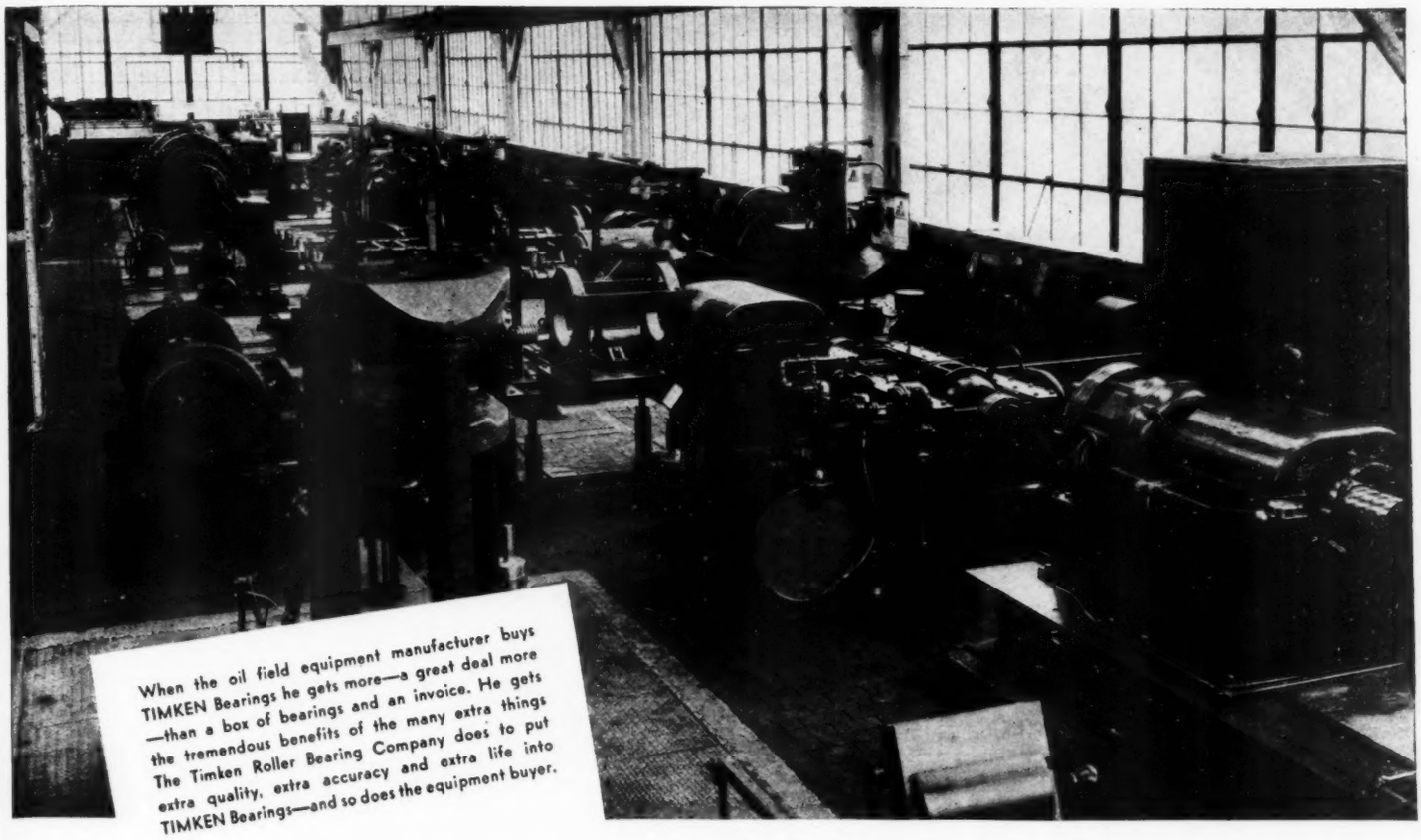
The EXTRA things the Timken Company does to give extra value and extra service to users of TIMKEN Bearings


When the oil field equipment manufacturer buys TIMKEN Bearings he gets more—a great deal more—than a box of bearings and an invoice. He gets the tremendous benefits of the many extra things The Timken Roller Bearing Company does to put extra quality, extra accuracy and extra life into TIMKEN Bearings—and so does the equipment buyer.

A section of the main testing room of the new Timken Physical Laboratory.

The New Timken Physical Laboratory

Scientific research and testing have always been important factors in TIMKEN Bearing production and application. Never before in the history of the bearing industry, however, have there been any research and testing facilities to match those of the new Timken Physical Laboratory.

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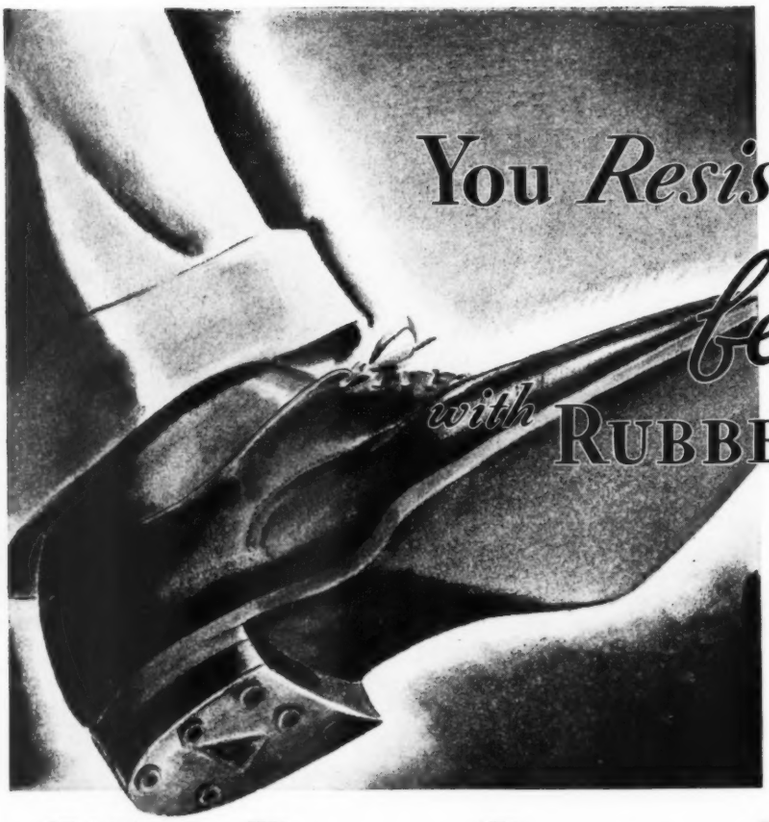

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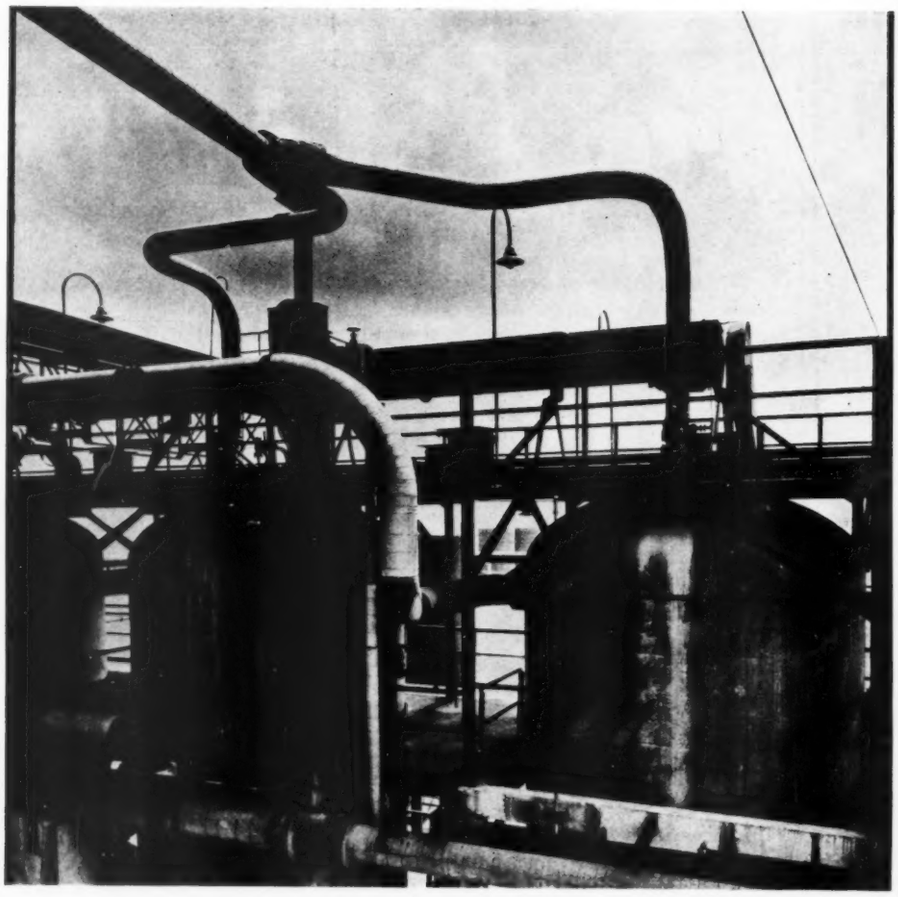
☐ Single-acting ☐ Double-acting
Size and type of intake_____

AIR COMPRESSOR

Make_____
Bore_____in. Stroke_____
No. Cylinders_____ RPM_____
☐ Single-acting ☐ Double-acting
Size and type of intake_____

DIESEL ENGINE

Make_____
☐ Plain-Scavenging . . . (Enter under "Gas Engine")
☐ Super-Scavenging . . . (Enter under "Gas Engine")
☐ Super-Charged . . . . (Enter under "Compressor")



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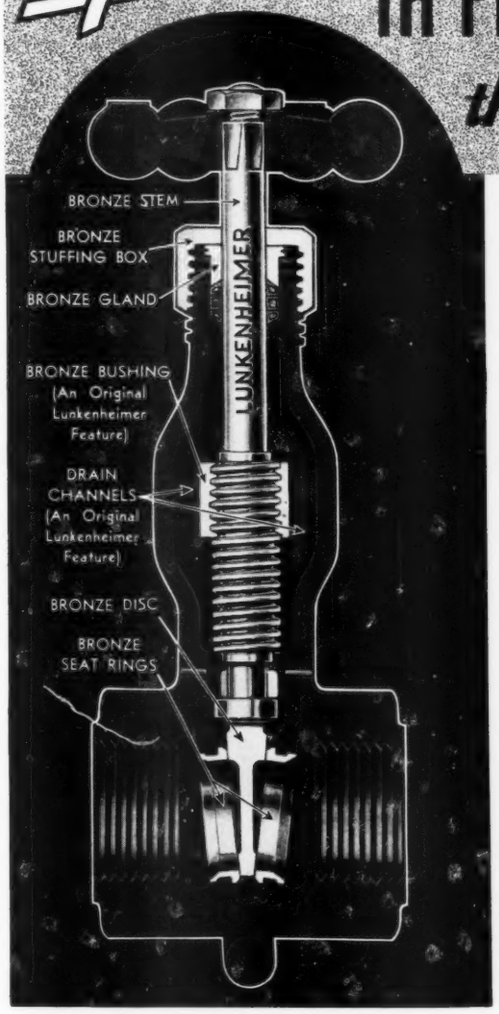

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